



LUXMAN 1500

SERVICE MANUAL

R 1500 CIRCUIT DESCRIPTION

Power Supply

The mains input to the Receiver goes via a 2 pole power switch to the mains transformer which has four secondary windings:

1. A 11 volt winding for the panel lamps.
2. A 25 volt winding for the speaker protection circuit.
3. A 75 volt centre tapped winding providing after full-wave rectification $\oplus$ and $\ominus$ supplies for the audio power amp section.
4. A 30-0-30 volt winding to provide 45 volts DC for the preamp and tuner sections. A potential divider using a zener diode which is used to obtain from 45 volts a 12 volt DC supply for the AM and FM tuner sections. The 2SC1382 transistor is used as a ripple filter providing 40 volts to the audio preamps. There are fuses in all the secondaries for transformer protection. A fuse is used as well in the preamp.

POWER AMPS

PNP transistors are used as a differential comparator; the audio input is fed to the first transistor and the feedback to the other. NPN metal can transistors are used as active loads for the differential comparator, the one NPN has its collector to ground, the other being the voltage amplifier for the entire output stage, which uses a PNP driver and a PNP output in the negative side connected as a darlington emitter follower configuration, and an NPN driver and NPN output is used in the positive side. These 4 transistors form what is known as a fully complementary symmetrical output stage.

Their input bases are bias with a 3 diode device (SV03) and a bias trim pot for idling current set (50 mA), 2 resistors and a condenser form the boots-trap constant current load for the voltage amplifier to drive the output stage. The junction of the emitter resistors is as a feed point for the differential comparator, and at the same time goes via a relay to the speaker selector switch to the speaker terminals and headphone socket via 680 ohm.

The headphone socket is always active regardless of speaker selection. PNP and NPN transistors are used to sense output current and voltage and if the output is short circuited will limit the drive to the output devices, thereby protecting the amplifier from overload.

Input sensitivity of the power amp is defined by the ratio of R811, R813 which = 700 mv for full output, and the low frequency roll off is determined by the reactance of C806 to R811 which in this circuit is 10Hz.

PRE AMP

Phono RIAA equalization amplifier 2 phono inputs can be selected both with the same input sensitivity. The RIAA

amplifier uses a NPN, PNP and NPN direct coupled triplet of transistors which are selected low noise types, the equalization and DC feedback are taken from the emitter of the NPN back to the emitter of the input NPN transistor. This amp has a gain of 36 db (2.3mv — 150mv) at 1 KHz. The linearity of this direct coupled combination offers high overload capabilities (100mv at 1 KHz). The 150mv nominal level is at the same level as the other functions.

The Mic amplifier uses basically the same circuit without equalization, being flat from 20 — 50 KHz with 38 dB gain.

The Function Switch selects AM, FM Aux 1 and 2 and Phono 1 and 2 the output of which can be mixed with the input from the mic amplifier. This audio then goes to the tape monitoring function switches.

There are two switches for the tape functions, these are mounted on the switch printed circuit board. The left switch enables in the "up" position dubbing from tape 1 — 2 and in the "lower" position from Tape 2 — 1, when "centre", it is off. The right-hand switch enables monitoring from Tape 1 in the up position, tape 2 in the lower and programme source in the centre position.

The switch for the loudness works in conjunction with the volume control so that its greatest effect is at low volume settings, the audio then passes on the tone control circuit.

LINEAR EQUALIZER and TONE CONTROL

The required selection will then go to the tone control printed circuit board which contains 2 NPN transistors direct coupled linear equalizer amp and 2 NPN transistor amp for tone control. The income signal is linear equalized by selecting the feedback components of this amp. The audio then passes on the tone control circuit. Two direct coupled NPN transistors are used in the Lux-type active bass and treble control, operating in a virtual earth mode with the input at the boost point of the controls and the base of the transistor fed from the slider of the bass control via C741 and C742, the emitter being the feedback point to the controls and providing the output which is at unity gain with respect to the input, to drive the active filter circuit. Included on the tone control board are two switches for changing to bass and treble turn over frequency points.

FILTER BOARD

The Sallen Keyes type filter circuit has components selectable by the front panel low and high cut switches to provide a 12 dB/oct. roll off. The output is sufficiently low impedance to drive the power amp circuit.

SPEAKER PROTECTION

Speaker protection relay is provided in this receiver to protect speakers from damage. Speaker output terminals must always have no significant residual DC voltage, but if some plus or minus voltage appears these terminals, the

relay operates and cuts speakers connection from output stage.

This circuit is mounted on the power supply board.

AM SECTION

A superhet design using a tuned RF amplifier, a mixer/local oscillator and two stages of IF amplification at 455 KHz. A ferrite rod antenna with 3 windings is used, the first winding is connected to the external antenna terminal, the second is connected to the first section of a 3 gang tuning condenser, the last winding feeding the base of the RF transistor amplifier. A tuned RF transformer is used to couple the collector to the base of the self-mixing oscillator. The oscillator operates at 455 KHz above the incoming signal to produce the intermediate frequency, which is passed through a first IFT and then amplified by two further transistor IF stages. The audio is then recovered by a germanium diode detector and passed on to the pre amp via noise filter and selector switch, and the signal strength meter is driven from the audio detector output. A silicon diode is used to provide an A.G.C. voltage which controls the gain of the first IF amplifier; the collector of this provides an amplified AGC back to the emitter of the RF transistor. This method used provides an audio output relatively constant with varying R.F. signal strength.

FM SECTION

An input balun transformer matches either 300 ohm or 75 ohm antenna input to the Front end, which has a 4 gang tuning capacitor and consists of a dual gate FET for the tuned RF amp feeding, via a two-section transformer, the bi-polar transistor mixer.

A bipolar transistor "Colpitts" oscillator operates at 10.7 mcs above the incoming signal. C116 is a negative temperature coefficient condenser to stabilize the oscillator to less than 25 KHz per 10 deg. Celsius. The output is then fed via a 1 pf condenser to the mixer, the resultant 10.7 MHz passes through a double tuned IFT included in the front end module.

The front end module is well shielded to prevent any spurious radiation, and to offer good image and selectivity responses.

IF

The IF strip is contained on the same printed circuit board as the stereo multiplex decoder and muting circuits.

The 10.7 MHz IF intermediate frequency is amplified by a transistor then passed through a ceramic filter with a side chain A.G.C. amplifier to provide a D.C. control voltage (A.G.C.) for the RF input FET to improve the front end overload capabilities. The main chain is again amplified by a further transistor and ceramic filter providing a wide pass band with steep sides.

A differential IC with a built-in constant current source provides partial limiting, this passing through an IF transformer into the final multistage I.C. which provides hard limiting characteristics for the ratio discriminator, which provides the composite audio output for the multiplex.

A second side chain amplifier and rectifier monitors the input to the first I.C. to provide a signal strength control command as well as driving the signal strength meter.

At the audio output when the receiver is off-tuned from centre either a positive or negative D.C. will appear which is monitored both by a centre tune meter and a bi-phase detector using one NPN and one PNP transistor which with another NPN forms an "AND" gate for one of two "shmitt" trigger circuits. The other shmitt trigger receives a command from the signal strength circuit previously mentioned. The collectors of the final transistor in each circuit form a "wired OR" gate which via the muting "On-Off" switch on the front panel controls the gate on the FET audio mute circuit if it is enabled. The composite audio passes on to the I.C. multiplex, which will derive the L and R audio output, the IC also is connected directly to the stereo indicator lamp.

The Left and Right go through L.C. type rejection filters to remove the 19 KHz pilot. These are both in one moulding.

Finally, a one transistor amplifier is used in each channel to raise the level to 400 m volts for the audio pre amp. A de-emphasis switch has been incorporated on the P.C. board for selecting either 75 μ sec. (American) or 50 μ sec. time constant.

R-1500 ALIGNMENT PROCEDURE

The alignment procedure described in each chart may be performed independently, without affecting the others.

Warm up the signal generators for at least 15 minutes to make certain that they are stabilized at their operating temperature particularly generators containing vacuum tubes. Consult the instruction manual supplied with the particular test instrument for specific information concerning connection and operation.

The test equipment listed here is intended only as a guide, but alternate instruments should be of similar quality.

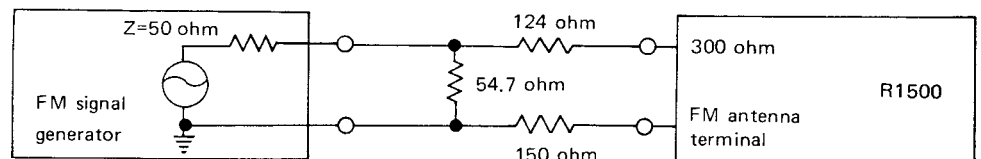
The following instruments are required for a complete alignment of the tuner.

1. Measurement instruments and tools

Signal source	1) FM signal generator (FMSG)	Meguro MSG-285A or equivalent
	2) Sweep generator (SWG)	JRC NJM-5217C or equivalent
	3) AM signal generator (AMSG)	Meguro MSG-221C or equivalent
	4) FM stereo modulator (MPXSG)	Sound technology-1000A or equivalent
	5) Audio oscillator (AFO)	Oscillation freq. range 10-100,000Hz, calibration error within 0.2%, distortion 0.1%
	10-100KHz 0.2% accuracy, Dist. 0.1%	
Output indicator	6) AM standard loop antenna	Meguro MLA-1001B or equivalent
	7) Oscilloscope (CRO)	Iwatsu SS-5057V or equivalent
	Mid bandwidth 5MHz	
	8) Distortion meter (HDM)	Shibasoku 796E or equivalent
Tools	9) AC volt meter (ACVTVM)	Kikusui 164 or equivalent
	10) DC volt meter (DCVTVM)	Kikusui 107A or equivalent
	11) Hex head alignment tool	
	12 Thin plastic shaft alignment tool	

2. General alignment conditions

- 1) The normal test voltage is within 10% of what is indicated on the receiver with less than 2% harmonic distortion.
- 2) Unless otherwise specified, the normal ambient temperature is 15–25°C and humidity 55–75%. But if this is not possible, 5–35°C, 45–85% will provide acceptable results.
- 3) FM dummy antenna shall be as follows if not otherwise specified. The output voltage of the signal generator is 1/4 of the unloaded terminal voltage.



- 4) Connect the low side of signal source and the output indicator to the chassis ground as close as possible to the high side connection unless otherwise specified.
- 5) The 10.7MHz marker used in each section of the alignment should be the same.
- 6) Marker insertion and amplitude should not distort the oscilloscope trace.
- 7) The AM standard loop antenna should be set above the ferrite loopstick antenna.
- 8) The output level of the sweep generator is measured by the output attenuator regardless of its terminated impedance.
- 9) FM modulation is 100% with ± 75 KHz
- 10) All tuner audio output measurement are at TAPEOUT 1.

Step.	Signal Source Connected to	Set signal to	Set Radio Dial to	Output Indicator Connected to	Adjust	Adjust for	
1	Set selector switch to "FM", muting switch to "off", stereo only switch to "off" and turn power switch "on"						
2				DC VTVM PB351 (17)		Check that voltage is between 11.5 ~ 12.3V	
3				Refer circuit diagram		Check each part voltage if necessary	
4	Sweep generator PB353 (1)	± 400KHz sweep centred at 10.7MHz generator output level 90–100dB	Quiet point on band	Oscilloscope PB353 TP–2		Due to the fixed frequency of the ceramic filters, find the centre frequency of a symmetrical band pass response. Make a note of it (for example 10.75MHz)	
5				Oscilloscope PB353 TP–3	T201 T202 core	Symmetrical response centred at the frequency noted by step 4	
6				Oscilloscope PB353 TP–4	T204 core		
7				Oscilloscope PB353 (19)	T203 top core T203 bottom core	Maximum linearity and amplitude of "S" curve centred at the frequency noted by step 4	
8	FM signal generator Across FM antenna terminals (300Ω) through matching network	Reduce the output level to zero (interstation receiving condition)	93MHz		T203 top core	Centre indication of the tuning meter	
9		93MHz at 400Hz 100% modulation, output level 1mV		Oscilloscope Distortion meter AC VTVM TAPEOUT 1	T203 bottom core	Minimum distortion. At the minimum distortion setting, the output level must be within 1/2dB of peak output.	
10	Repeat steps 8 and 9 as necessary to obtain maximum output level and minimum distortion at centre point of tuning meter and the meter must also shows centre at interstation state.						
11	FM signal generator Across FM antenna terminals (300Ω) through matching network	88MHz at 400Hz 30% modulation, generator output level 1mV	88MHz	Oscilloscope Distortion meter AC VTVM TAPE OUT 1	VR202	90% of full scale on signal meter reading	
12					T204 core	The signal strength meter must indicate its maximum, at the same time as the centre tune meter indicates centre	
13					L104	Accurate indication of pointer on dial to within ± 1 pointer width	
14		108MHz at 400Hz 30% modulation, generator output level 1mV	108MHz		TC104		
15		88MHz at 400Hz 30% modulation, generator output level 5 ~ 10μV	88MHz		T101 top core T101 bottom core	Maximum indication of signal strength meter	
16					L101		

Step.	Signal Source Connected to	Set signal to	Set Radio Dial to	Output Indicator Connected to	Adjust	Adjust for
17	FM signal generator Across FM antenna terminals (300Ω) through matching network	88MHz at 400Hz 30% modulation, generator output level 5 ~ 10μV	88MHz	Oscilloscope Distortion meter AC VTVM TAPE OUT 1	L102	Maximum indication of signal strength meter
18					L103	
19		108MHz at 400Hz 30% modulation, generator output level 5 ~ 10μV	108MHz		TC101	
20					TC102	
21					TC103	
22	Repeat steps 13 ~ 21 as necessary to obtain correct tuning on dial scale and the maximum indication of signal meter with uniform sensitivity throughout the band					
23	FM signal generator Across FM antenna terminals (300Ω) through matching network	Reduce the output level to zero (interstation receiving condition)	93MHz	Oscilloscope Distortion meter AC VIVM TAPE OUT 1	T203 top core	Center indication of the tuning meter
24		93MHz at 400Hz 100% modulation, output level 1mV			T203 bottom core	Minimum distortion. At the minimum distortion setting, the output level must be within 1/2 dB of peak output.
25		88MHz at 400Hz 100% modulation	88MHz			IHF maximum usable sensitivity which is the minimum output level of FMSG required for distortion and noise to be -30dB of total output
26		108MHz at 400Hz 100% modulation	108MHz			
27		Set muting switch "on" & turn muting level to full clockwise				
28	FM signal generator Across FM antenna terminals (300Ω) through matching network	98MHz at 400Hz 100% modulation generator output level 4μV	98MHz	Oscilloscope AC VTVM TAPE OUT 1	VR201	Fix VR201 at the point where output signals appear
29		98MHz at 19KHz 3 ~ 4% modulation generator output level 1mV		Oscilloscope PB351 CP~5	T205 core	Maximum amplitude of oscilloscope trace
30					T207 core	
31					T206 core	
32	Repeat steps 29 ~ 31 as necessary for alignment of perfect tuning					
33	FM signal generator Across FM antenna terminals (300Ω) through matching network	98MHz at 19KHz 10% (L-R) 400Hz 45% output level 1mV	98MHz	Oscilloscope AC VTVM TAPE OUT 1	T206 core	To obtain peak output voltage
34		98MHz at 19KHz 10% L (or R) stereo 90% modulation output level 1mV			VR203	Maximum separation

Step.	<u>Signal Source</u> Connected to	Set signal to	Set Radio Dial to	<u>Output Indicator</u> Connected to	Adjust	Adjust for
35	Set selector switch to "AM"					
36	Connect TP2 and TP3 on PB460					
37	Sweep generator PB460 (1) through 1μF mylar capacitor	±20 ~ 25KHZ sweep centred at 455KHz generator output level 3 ~ 10mV	Quiet point on band near 1600KHz	Oscilloscope <u>AC VTVM</u> PB460 (7)	T403 top core	Maximum symmetrical response centred at 455KHz
38					T403 bottom core	
39					T404 top core	
40					T404 bottom core	
41					T405 core	
42	Disconnect TP2 and TP3 connected at step 36					
43	Adjust VR401 to mechanical center position					
44	<u>AM signal generator</u> Standard radiating loop antenna placed near AM built in antenna	600KHz at 400Hz 30% modulation, field strength 50dB/m	600KHz	Oscilloscope <u>AC VTVM</u> TAPE OUT 1	T402 core	Accurate indication of pointer on dial to within ± 1 pointer width
45					L001 core	Maximum reading on AC VTVM
46					L401 core	
47		1400KHz at 400Hz 30% modulation, field strength 50dB/m	1400KHz		TC003	Accurate indication of pointer on dial to within ± 1 pointer width
48					TC001	Maximum reading on AC VTVM
49					TC002	
50	Repeat steps 44 ~ 49 as necessary to obtain exact tuning on dial scale and maximum sensitivity					
51	<u>AM signal generator</u> Standard radiating loop antenna placed near AM built in antenna	1000KHz at 400Hz 30% modulation, field strength 90dB/m	1000KHz	Oscilloscope <u>AC VTVM</u> TAPE OUT 1	VR401	To obtain 100mV at TAPE OUT 1

SEMICONDUCTOR SPECIFIC CHART

TRANSISTORS (Ta = 25°C)

TYPE	MAX. RATING			CHARACTERISTICS											
	Pc W	Vceo V	Ic mA	hfe				fT MHz			NF				
				min	max	Ic mA	Vce V	typ	Ic mA	Vce V	max dB	Ic mA	Vce V	fre Hz	Zg Ω
2SA620K	0.2	70	50	150	320	1	6	120	1	6	0.7	0.1	6	1K	10K
2SA640L	0.25	45	30	225	450	0.5	3	100	1	3					
2SA679Y	100	120	12000	70	140	2000	5	6	2000	5					
2SA733P,Q	0.25	40	100		270	1	6	180	10	6	20	0.3	6	100	10K
2SA762-22	23	130	2000	100	240	400	2	80	100	2					
2SC372Y	0.2	30	100	120	240	2	12	200	1	10					
2SC381R	0.1	30	20	40	80	1	6	350	1	6					
2SC535	0.1	20	20					700	5	6	5.5	1	6	100M	50
2SC13820,Y	0.8	80	750	70	240	150	2	100	150	2					
2SC1079Y	100	150	12000	70	140	2000	5	9	2000	5					
2SC945P,Q	0.25	40	100	135	270	1	6	300	10	6	20	0.5	6	1K	500
2SC1103A	0.8	250	100	100	200	10	10	80	10	30					
2SC1000GR	0.2	50	100	200	400	2	6	80	1	6	3	0.1	6	100	10K
2SC1345E	0.2	50	100	400	800	2	12	230	2	12	1	0.1	6	1K	10K
2SC1431-22	23	130	2000	100	240	400	2	80	100	2					

FIELD EFFECT TRANSISTOR (Ta = 25°C)

TYPE	MAX. RATING			CHARACTERISTICS						
	Pch mW	VG1SS, VG2SS V	IG1, IG2 mA	IDSS mA			Crss pF	NF		
				min	max	Vds V		Vds V	typ	Vds V
3SK30	200	-15	10	3	20	10	0.6	10	2.0	10
2SK19	200	-18	10	3	24	10	0.8	10	2.0	10
2SK30A	100	-50	10	0.6	1.4	10	2.6	10	0.5	15

DIODES (Ta = 25°C)

TYPE	MAX. RATING			CHARACTERISTICS			
	IF A	Vr V	Surge A	If		Ir	
				mA	Vf V	μA	Vr V
IS188	0.05	-35	0.5	0.004	0.1	-75	-10
IS1554	0.3	-50	1	100	1.0	0.5	-50
KB265	0.03			0.003	1.31		
KB-165	0.05	3		0.003	0.65		
SV-03	0.15			1	1.8	10	-100
WZ-120	0.04	-12		20	0.8	0~40mA	-12
CZ-117	0.085	-11.7		20	0.85	0~85mA	-11.7
IN4001	1	-50	30	1000	1.1	5	-50
IN4003	1	-200	30	1000	1.1	5	-200
HI-FI SPECIAL	3	-400	150	3000	1.25	5	-400

INTEGRATED CIRCUIT SPECIFIC CHART

TA7061AP

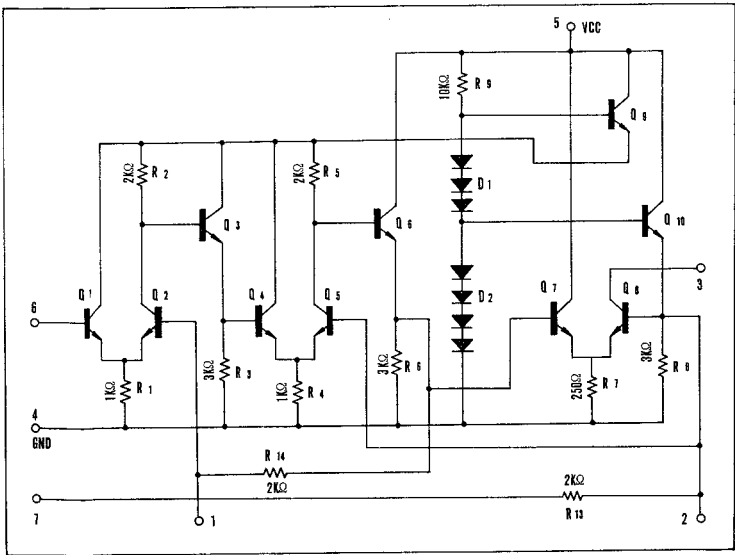
MAXIMUM LIMITS OF DEVICE (Ta = 25°C)

	Symbol	Rating	Unit
Max. Vcc	Vcc	15	V
Input voltage (terminals 6-7)	VI	± 3	V
Max. dissipation	PD	300	mW
Operating temperature (Vcc = 7.5V)	Topr	-30~75	°C
Storage temperature	Tstg	-55~125	°C

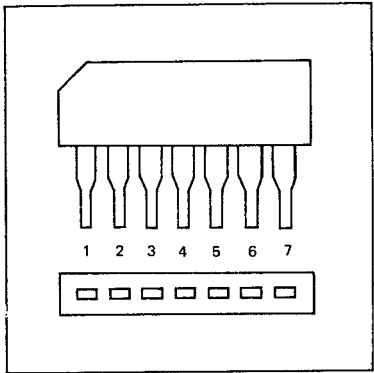
ELECTRICAL SPECIFICATION (Ta = 25°C)

	Symbol	Condition of measurement	Min.	Typ.	Max.	Unit
Current vs supply Vcc	Icc	Vcc = 6.0V		11	13	mA
		Vcc = 7.5V	7	8.5		
Gain (dB)	Gp	Vcc = 7.5V, f = 10.7MHz	66	69	72	dB
Input impedance	RI	Vcc = 7.5V, f = 10.7MHz		5		KΩ
Input capacitance	CI			6		pF
Output impedance	Ro	Vcc = 7.5V, f = 10.7MHz		10		KΩ
Output capacitance	Co			5		pF
Input voltage for full limiting	VI (lim)	Vcc = 7.5V, RL = 1KΩ		600		μV

EQUIVALENT CIRCUIT



PIN CONNECTOR



LM703

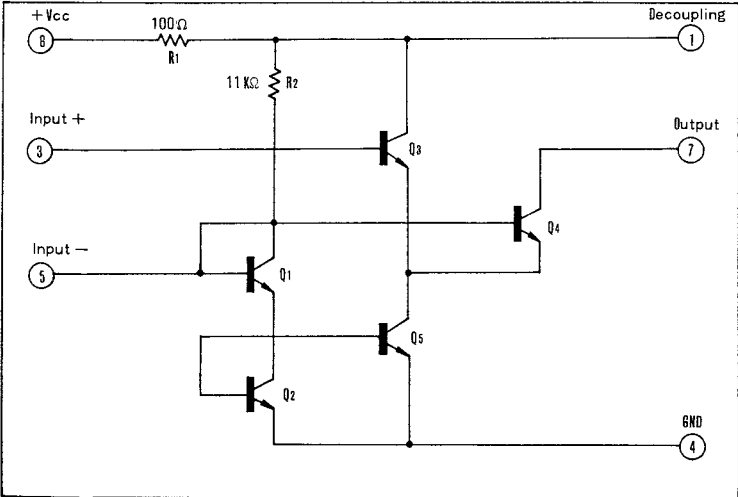
MAXIMUM LIMITS OF DEVICE (Ta = 25°C)

	Symbol	Rating	Unit
Max. supply voltage	Vcc	20	V
Output collector voltage	V7	24	V
Input voltage	V3-5	±5.0	V
Max. dissipation	PD	200	mW
Operating temperature	Ta	0 ~ 70	°C
Storage temperature	Tstg	-65 ~ +150	°C

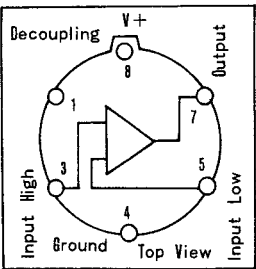
ELECTRICAL SPECIFICATION (Ta = 25°C Vcc = 12V)

	Symbol	Condition of measurement	Min.	Typ.	Max.	Unit
Power dissipation	PD	ein = 0		71	96	mW
Output collector current	17	ein = 0	1.5	2.5	3.3	mA
Peak to peak current	iopp	ein = 400mVrms f = 10.7MHz	3.0	5.0		mA P-P
Output saturation	Vo (SAT)				1.7	V
Forward transfer admittance		ein = 10mVrms f ≤ 10.7MHz	24	33		mV
Input conductance	gin	ein ≤ 10mVrms f ≤ 10.7MHz		0.35	1.0	mV
Input capacitance	cin	ein ≤ 10mVrms f ≤ 10.7MHz		9.0	12.5	PF
Output capacitance	Co	f ≤ 10.7MHz		2.6	4.0	PF
Output conductance	go	eo ≤ 10mVrms f ≤ 10.7MHz		0.03	0.05	mV
Voltage gain	Gv	f = 100MHz		28		dB

EQUIVALENT CIRCUIT



PIN CONNECTOR
(TOP VIEW)



μPC554C

ABSOLUTE MAXIMUM RATING (Ta = 25°C)

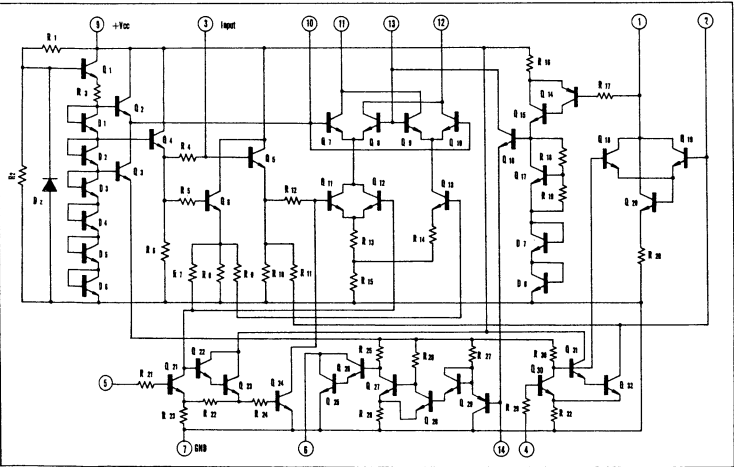
	Symbol	Rating	Unit
Supply voltage	Vcc	15	V
Max. device current	Icc	18	mA
Lamp driver current, max.	IL	100	mA
Device dissipation, max.	PD	400	mW
Operating temperature	Topr	0~+75	°C
Storage temperature	Tstg	40~±125	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C, Vcc = +9.0V)

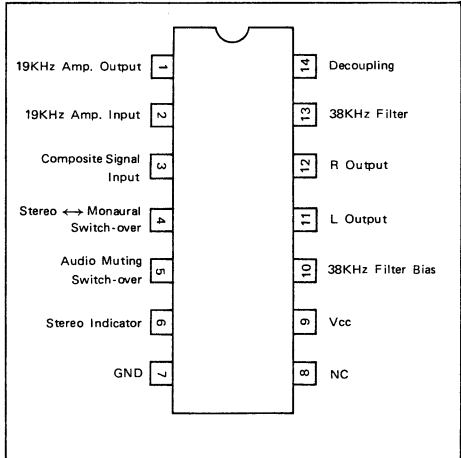
	Symbol	Circuit for measurement	Condition of measurement	Min.	Typ.	Max.	Unit
Circuit current	Icc	1	at zero signal		10	18	mA
Input impedance	Zi	1			20		KΩ
Separation			f = 100Hz		35		dB
			f = 1KHz		45		
			f = 10KHz		30		
Gain (dB)	Av	1	38KHz B.E.F.		-1.5		dB
Channel balance	ch. B	1	(Mono)		0.2	2.0	dB
Distortion	T.H.D.		(Mono)		0.5	1.0	%
Audio / muting changeover level	Mute OFF	1			0.85	1.00	V
	Mute ON	1		1.00	1.08		
Sensitivity of Stereo indicator lamp	Lamp ON	1	(Pilot level)		12		mV
	Lamp OFF	1			8.4		
Stereo / mono Changeover level	STEREO	1		1.00	1.13		V
	MONO	1			0.82	1.00	
AM suppression	19KHz		(within 1KHz)		30		dB
	38KHz				25		
SCA rejection	SCA Rejection				55		dB
Muting		1		45	55		dB

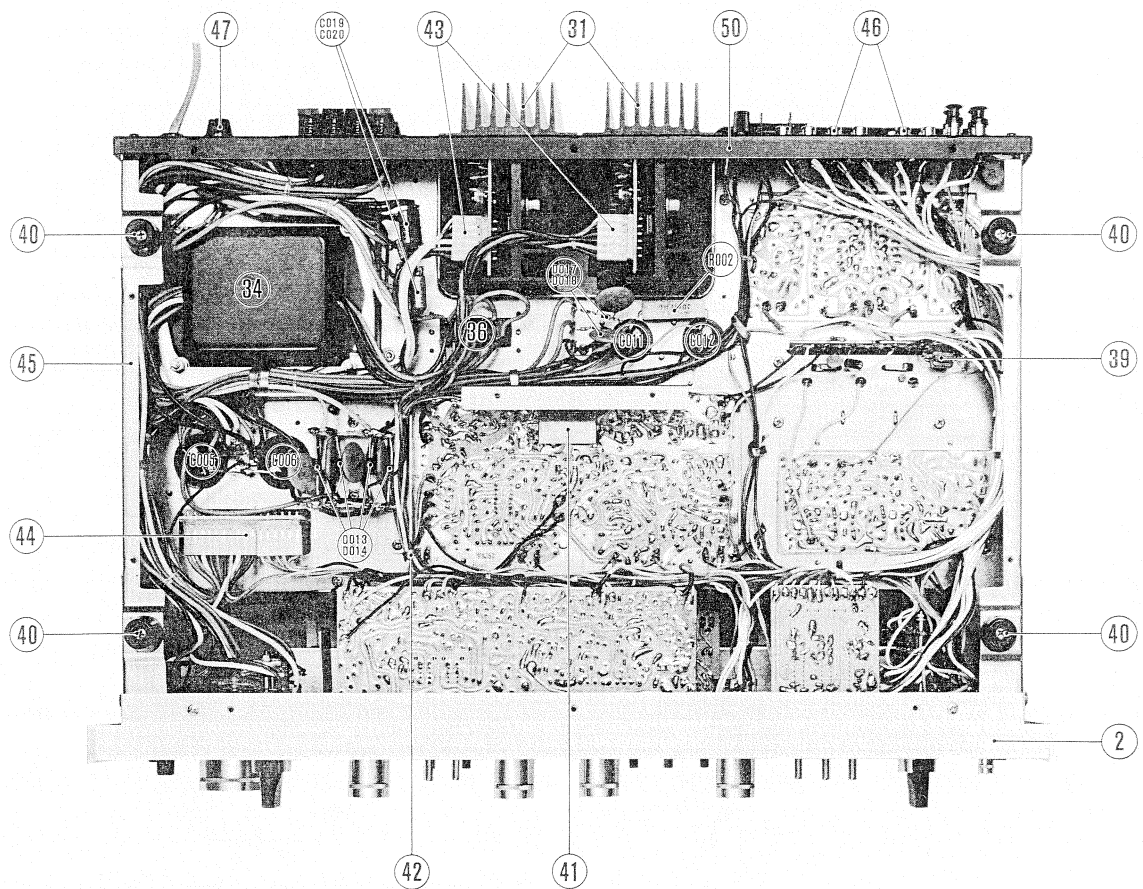
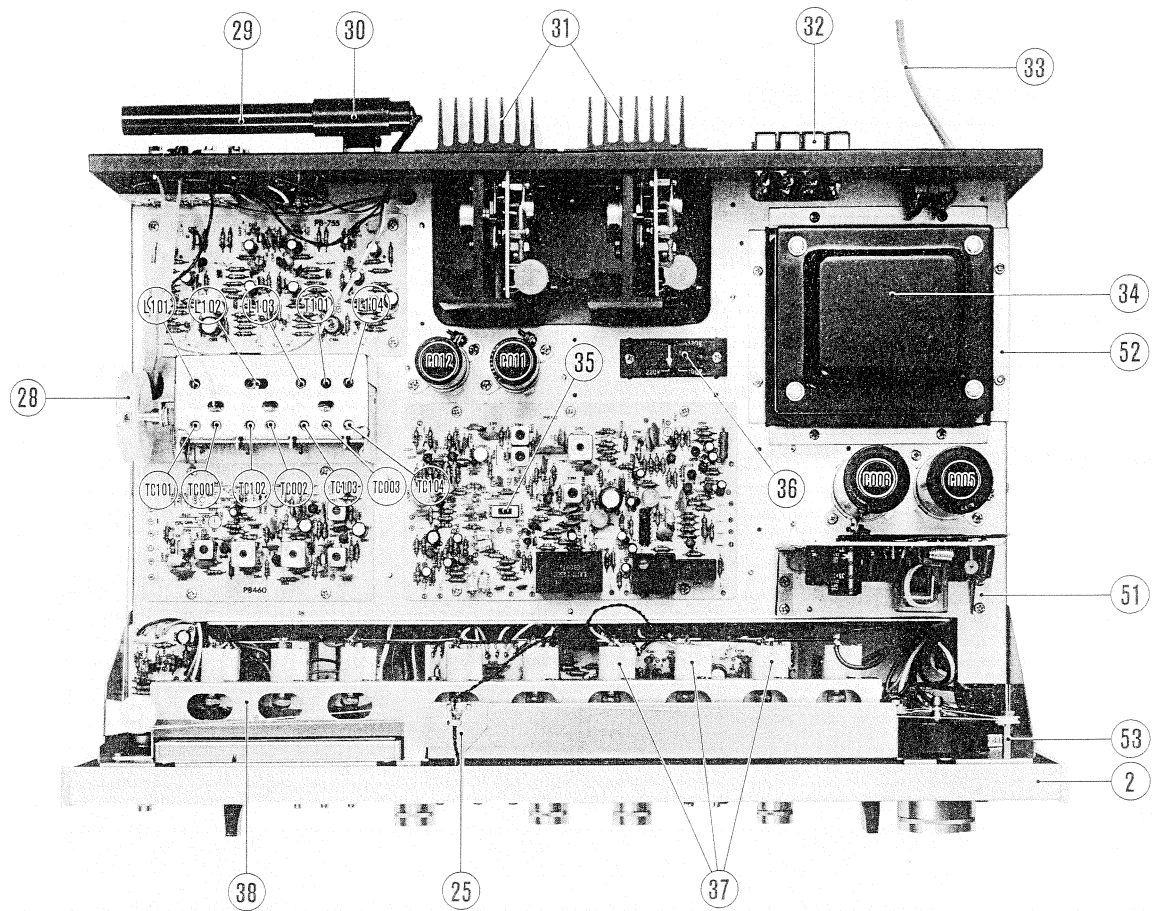
- Note
1. Condition of measurement = input signal 200mVrms (Pilot 10%), frequency 1KHz.
 2. R.P.F. of f = 15KHz shall be used for separation measurement.

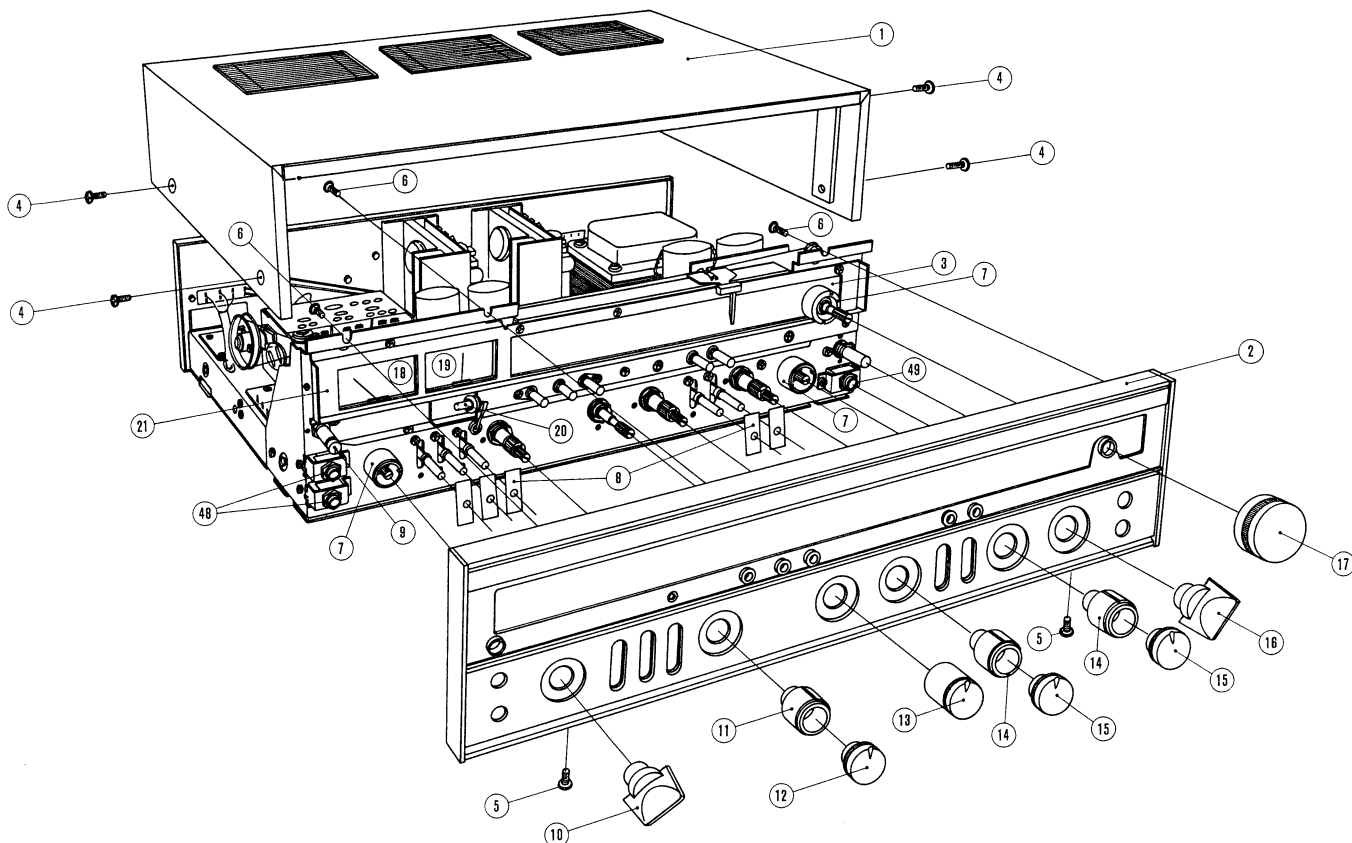
EQUIVALENT CIRCUIT



PIN CONNECTOR (Top view)







1. Cover
(Wood Finish, ex Rose wood)

2. Pannel
(Front complete Ass'y)

3. Dial Scale

4. Screw 5mm x 18mm

5. Screw 3mm x 6mm

6. Screw 4mm x 4mm

7. Bush, mounting

8. Mask, paper

9. Knob (Mic level)

10. Knob (Input selector)

11. Knob (Outer volume)

12. Knob (Inner volume)

13. Knob (Linear equalizer)

14. Knob (Outer tone control)

15. Knob (Inner tone control)

16. Knob (Speaker selector)

17. Knob (Tuning)

18. Singnal strength meter

19. FM fine tuning meter

20. Stereo beacon

21. Dial scale cover

22. Tuning shaft and flywheel ass'y complete with mounting collect

23. Pully 13mm

24. Pully 20mm

25. Tuning pointer ass'y (Complete with lamps)

26. Cord dial

27. Spring (Tension for dial cord)

28. Drum (Tuning capacitor)

29. AM ferrite core antenna

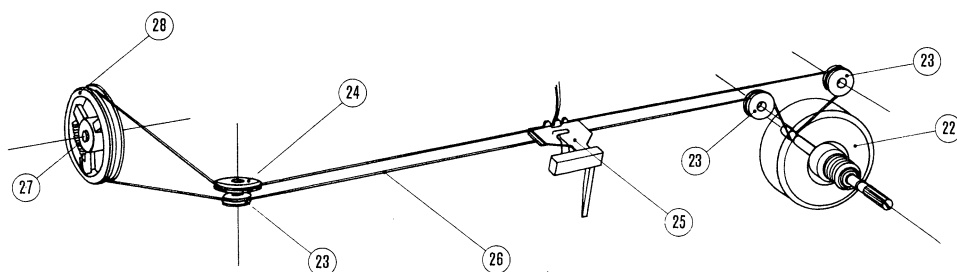
30. Braket, antenna

31. Power amp. complete ass'y

32. Speaker terminals

33. Mains cord

34. Power transformer



35. De-emphasis switch 50 μ sec $\leftrightarrow$ 75 μ sec (E MODEL only)

36. Voltage selector 100-110-220-240V (E MODEL only)

37. Dial illumination lamps

38. Dial lamp holder

39. Antenna balun

40. Foot

41. Shield IF

42. Clamp, cable

43. Connector, power amp.

44. Connector, power supply

45. Chassis complete ass'y

46. Pin jack ass'y Female

47. Fuse holder (E & U MODEL only)

48. Microphone jack

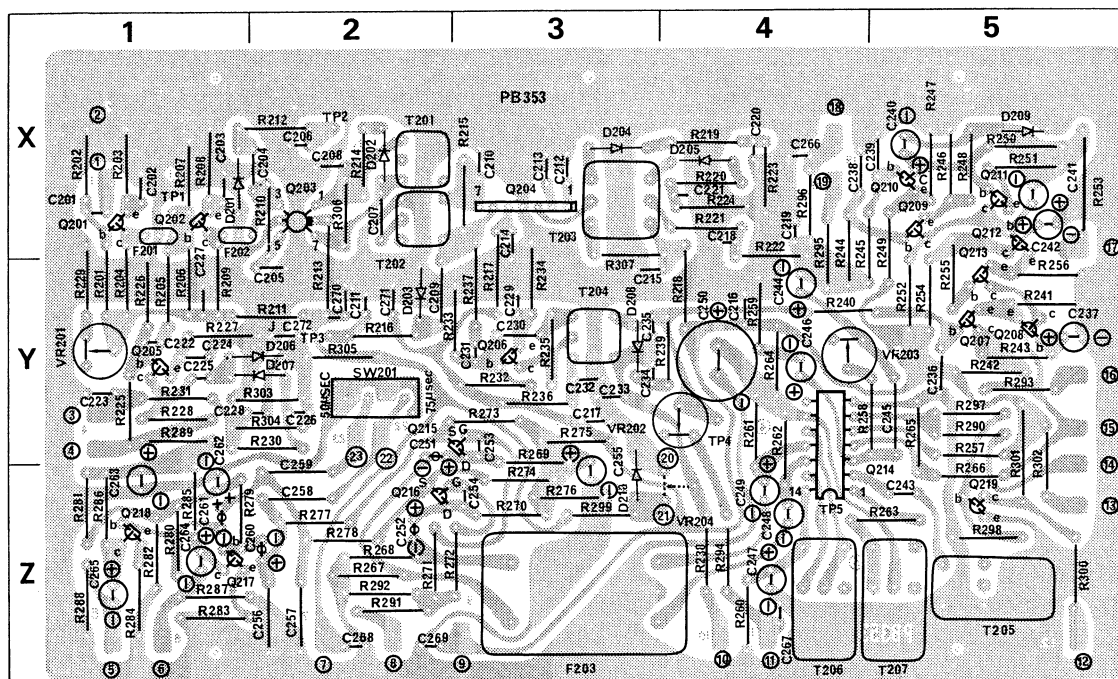
49. Headphone jack

50. Pannel back

51. Braket, power supply board

52. Mounting, transformer

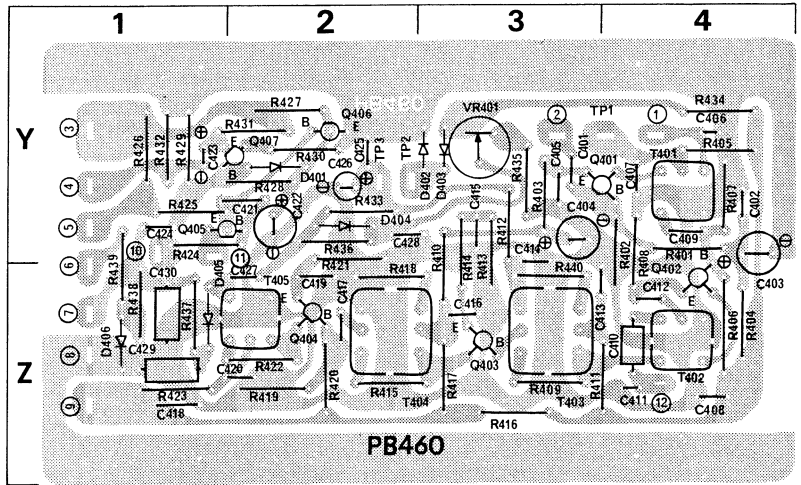
53. Stand, pully



PB-353 Component Location

R201	Y1	R239	Y4	R277	Z2	C212	X3	C250	Y4	Q210	X5
R202	X1	R240	Y4	R278	Z2	C213	X3	C251	Z2	Q211	X5
R203	X1	R241	Y5	R279	Z1	C214	X3	C252	Z2	Q212	X5
R204	Y1	R242	Y5	R280	Z1	C215	Y3	C253	Y3	Q213	Y5
R205	Y1	R243	Y5	R281	Z1	C216	Y4	C254	Z3	Q214	Y4
R206	Y1	R244	X4	R282	Z1	C217	Y3	C255	Z3	Q215	Y2
R207	X1	R245	X4	R283	Z1	C218	X4	C256	Z2	Q216	Z2
R208	X1	R246	X5	R284	Z1	C219	X4	C257	Z2	Q217	Z1
R209	Y1	R247	X5	R285	Z1	C220	X4	C258	Z2	Q218	Z1
R210	X2	R248	X5	R286	Z1	C221	X4	C259	Z2	Q219	Z5
R211	Y2	R249	X4	R287	Z1	C222	Y2	C260	Z2		
R212	X2	R250	X5	R288	Z1	C223	Y1	C261	Z1	D201	X1
R213	Y2	R251	X5	R289	Y1	C224	Y1	C262	Z1	D202	X2
R214	X2	R252	Y5	R290	Y5	C225	Y1	C263	Z1	D203	Y2
R215	X3	R253	X5	R291	Z2	C226	Y2	C264	Z1	D204	X3
R216	Y2	R254	Y5	R292	Z2	C227	Y1	C265	Z1	D205	X4
R217	Y3	R255	X5	R293	Y5	C228	Y2	C266	X4	D206	Y2
R218	Y4	R256	Y5	R294	Z4	C229	Y3	C267	Z4	D207	Y2
R219	X4	R257	Y5	R295	X4	C230	Y3	C268	Z2	D208	Y3
R220	X4	R258	Y4	R296	X4	C231	Y3	C269	Z2	D209	X5
R221	X4	R259	Y4	R297	Y5	C232	Y3			D210	Z3
R222	Y4	R260	Z4	R298	Z5	C233	Y3	VR201	Y1	D211	(X5)
R223	X4	R261	Y4	R299	Z3	C234	Y3	VR202	Y4		
R224	X4	R262	Y4	R300	Z5	C235	Y3	VR203	Y4	T201	X1
R225	Y1	R263	Z5	R301	Y5	C236	Y5			T202	X1
R226	Y1	R264	Y4	R302	Y5	C237	Y5	F201	X1	T203	X3
R227	Y1	R265	Y5			C238	X4	F202	X1	T204	Y3
R228	Y1	R266	Z5	C201	X1	C239	X5	F203	Z3	T205	Z5
R229	Y1	R267	Z2	C202	X1	C240				T206	Z4
R230	Y2	R268	Z2	C203	X1	C241	X5	Q201	X1	T207	Z5
R231	Y1	R269	Y3	C204	X2	C242	X5	Q202	X1		
R232	Y3	R270	Z3	C205	Y2	C243	Z5	Q203	X2	(1)	X1
R233	Y2	R271	Z2	C206	X2	C244	Y4	Q204	X3	(2)	X1
R234	Y3	R272	Z2	C207	X2	C245	Y5	Q205	Y1	(3)	Y1
R235	Y3	R273	Y3	C208	X2	C246	Y4	Q206	Y3	(4)	Y1
R236	Y3	R274	Z3	C209	Y2	C247	Z4	Q207	Y5	(5)	Z1
R237	Y3	R275	Y3	C210	X3	C248	Z4	Q208	Y5	(6)	Z1
R238	Z4	R276	Z3	C211	Y2	C249	Z4	Q209	X5	(7)	Z2

PB-460



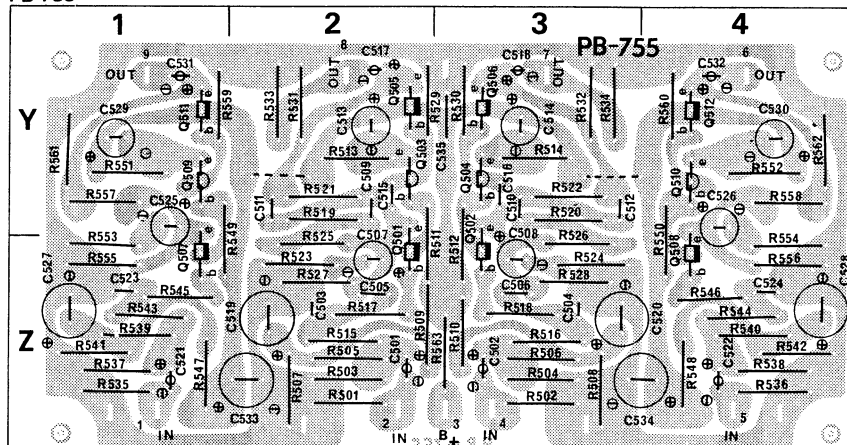
PB-460 Component Location

R401	Y4	C415	Y3
R402	Y4	C416	Y3
R403	Y3	C417	Z2
R404	Z4	C418	Z1
R405	Y4	C419	Z2
R406	Z4	C420	Z2
R407	Y4	C425	Y2
R408	Y4	C426	Y2
R409	Z3	C427	Z2
R410	Z3	C428	Y2
R411	Z4	C429	Z1
R412	Y3	C430	Z1
R413	Y3		
R414	Y3	VR401	Y3
R415	Z2		
R416	Z3	T401	Y4
R417	Z3	T402	Z4
R418	Z2	T403	Z3
R419	Z2	T404	Z2
R420	Z2	T405	Z2
R421	Y2		
R422	Z2	Q401	Y4
R423	Z1	Q402	Z4
R433	Y2	Q403	Z3
R434	Y4	Q404	Z2
R435	Y3		
R436	Y2	D402	Y3
R437	Z1	D403	Y3
R438	Z1	D404	Y2
R439	Z1	D405	Z1
R440	Z3	D406	Z1
C401	Y3	(1)	Y4
C402	Y4	(2)	Y3
C403	Y3	(6)	Z1
C404	Y3	(7)	Z1
C405	Y3	(8)	Z1
C406	Y4	(9)	Z1
C407	Y4	(12)	Z4
C408	Z4		
C409	Y4	TP1	Y4
C410	Z4	TP2	Y2
C411	Z4	TP3	Y2
C412	Z4		
C413	Z3		
C414	Y3		
TP1	X1		
TP2	X2		
TP3	Y2		
TP4	Y4		
TP5	Z4		

PB-755 Components Location

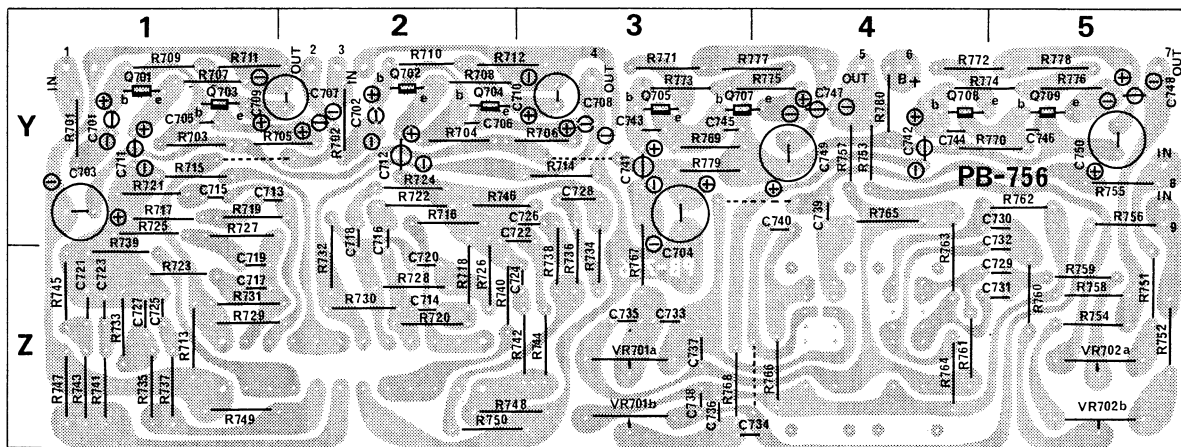
R501	.....	Z2	R516	.....	Z3	R531	.....	Y2	R546	.....	Z4	R561	.....	Y1	C530	.....	Y4
R502	.....	Z3	R517	.....	Z2	R532	.....	Y3	R547	.....	Z1	R562	.....	Y4	C531	.....	Y1
R503	.....	Z2	R518	.....	Z3	R533	.....	Y2	R548	.....	Z4	R563	.....	Y3	C532	.....	Y4
R504	.....	Z3	R519	.....	Y2	R534	.....	Y3	R549	.....	Z1				C533	.....	Z2
R505	.....	Z2	R520	.....	Y3	R535	.....	Z1	R550	.....	Z4	C501	.....	Z2	C534	.....	Z3
R506	.....	Z3	R521	.....	Y2	R536	.....	Z4	R551	.....	Y1	C502	.....	Z3	C535	.....	Y3
R507	.....	Z2	R522	.....	Y3	R537	.....	Z1	R552	.....	Y4	C503	.....	Z2			
R508	.....	Z3	R523	.....	Z2	R538	.....	Z4	R553	.....	Z1	C504	.....	Z3	Q501	.....	Z2
R509	.....	Z2	R524	.....	Z3	R539	.....	Z1	R554	.....	Z4	C505	.....	Z2	Q502	.....	Z3
R510	.....	Z3	R525	.....	Z2	R540	.....	Z4	R555	.....	Z1	C506	.....	Z3	Q503	.....	Y2
R511	.....	Z2	R526	.....	Z3	R541	.....	Z1	R556	.....	Z4	C507	.....	Z2	Q504	.....	Y3
R512	.....	Z3	R527	.....	Z2	R542	.....	Z4	R557	.....	Y1	C508	.....	Z3	Q505	.....	Y2
R513	.....	Y2	R528	.....	Z3	R543	.....	Z1	R558	.....	Y4	C509	.....	Y2	Q506	.....	Y3
R514	.....	Y3	R529	.....	Y2	R544	.....	Z4	R559	.....	Y1	C510	.....	Y3	Q507	.....	Z1
R515	.....	Z2	R530	.....	Y3	R545	.....	Z1	R560	.....	Y4	C511	.....	Y2	Q508	.....	Z4

PB-755



C512	.....	Y3	Q509	.....	Y1
C513	.....	Y2	Q510	.....	Y4
C514	.....	Y3	Q511	.....	Y1
C515	.....	Y2	Q512	.....	Y4
C516	.....	Y3			
C517	.....	Y2	(1)	.....	Z1
C518	.....	Y3	(2)	.....	Z2
C519	.....	Z2	(3)	.....	Z3
C520	.....	Z3	(4)	.....	Z3
C521	.....	Z1	(5)	.....	Z4
C522	.....	Z4	(6)	.....	Y4
C523	.....	Z1	(7)	.....	Y3
C524	.....	Z4	(8)	.....	Y2
C525	.....	Y1			
C526	.....	Y4			
C527	.....	Z1			
C528	.....	Z4			
C529	.....	Y1			

PB-756



PB-756 Components Location

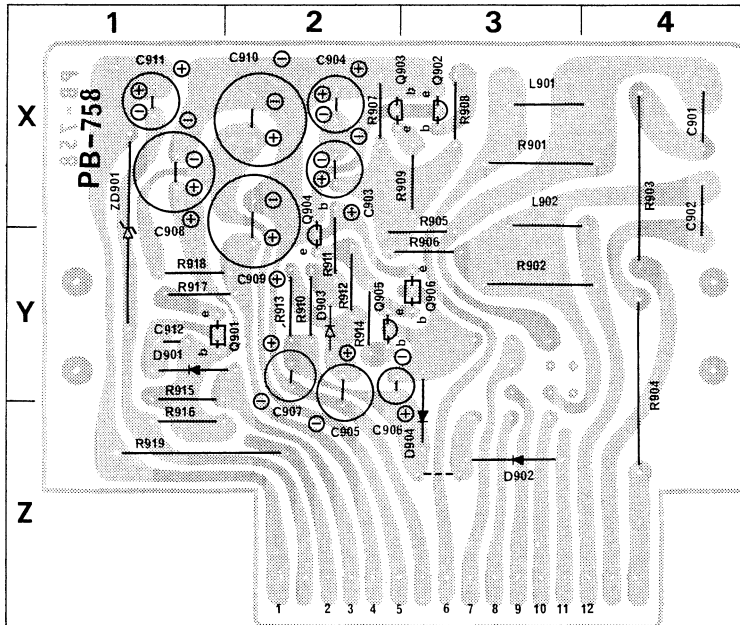
R701	.....	Y1	R714	.....	Y3	R727	.....	Y1	R740	.....	Z2	R753	.....	Y4	R766	.....	Z4
R702	.....	Y2	R715	.....	Y1	R728	.....	Z2	R741	.....	Z1	R754	.....	Z5	R767	.....	Z3
R703	.....	Y1	R716	.....	Y2	R729	.....	Z1	R742	.....	Z3	R755	.....	Y5	R768	.....	Z3
R704	.....	Y2	R717	.....	Y1	R730	.....	Z2	R743	.....	Z1	R756	.....	Y4	R769	.....	Y3
R705	.....	Y2	R718	.....	Z2	R731	.....	Z1	R744	.....	Z3	R757	.....	Y4	R770	.....	Y5
R706	.....	Y3	R719	.....	Y1	R732	.....	Z2	R745	.....	Z1	R758	.....	Z5	R771	.....	Y3
R707	.....	Y1	R720	.....	Z2	R733	.....	Z1	R746	.....	Z2	R759	.....	Z5	R772	.....	Y4
R708	.....	Y2	R721	.....	Y1	R734	.....	Z3	R747	.....	Z1	R760	.....	Z5	R773	.....	Y3
R709	.....	Y1	R722	.....	Y2	R735	.....	Z1	R748	.....	Z2	R761	.....	Z4	R774	.....	Y4
R710	.....	Y2	R723	.....	Z1	R736	.....	Z3	R749	.....	Z1	R762	.....	Y5	R775	.....	Y4
R711	.....	Y1	R724	.....	Y2	R737	.....	Z1	R750	.....	Z2	R763	.....	Z4	R776	.....	Y5
R712	.....	Y2	R725	.....	Y1	R738	.....	Z3	R751	.....	Z5	R764	.....	Z4	R777	.....	Y3
R713	.....	Z1	R726	.....	Z2	R739	.....	Z1	R752	.....	Z5	R765	.....	Y4	R778	.....	Y5 *

PB-758 Components Location

R901	.....	X3	C907	.....	Y2
R902	.....	Y3	C908	.....	X1
R903	.....	X4	C909	.....	X2
R904	.....	Y4	C910	.....	X2
R905	.....	Y3	C911	.....	X1
R906	.....	Y3	C912	.....	X1
R907	.....	X2			
R908	.....	X3	Q901	.....	Y1
R909	.....	X3	Q902	.....	X3
R910	.....	Y2	Q903	.....	X2
R911	.....	Y2	Q904	.....	Y2
R912	.....	Y2	Q905	.....	Y2
R913	.....	Y2	Q906	.....	Y3
R914	.....	Y2			
R915	.....	Y1	D901	.....	Y1
R916	.....	Z1	D902	.....	Z3
R917	.....	Y1	D903	.....	Y2
R918	.....	Y1	D904	.....	Z3
R919	.....	Z1			

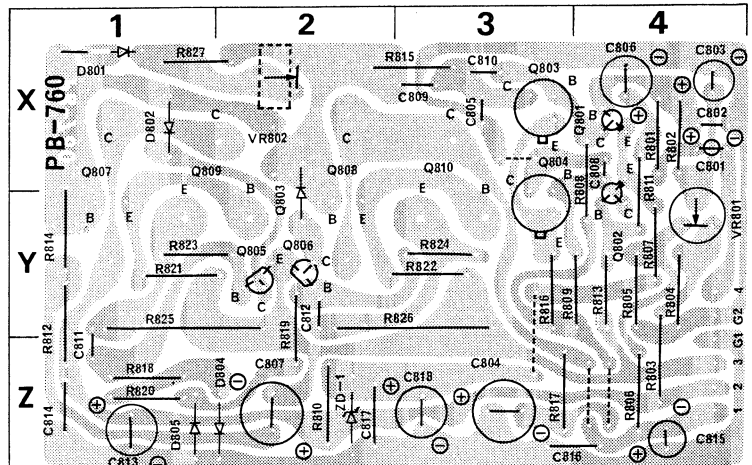
C901	.....	X4	ZD901	.....	Y1	(6 )	.....	Z3
C902	.....	X4	(1 )	.....	Z2	(7 )	.....	Z3
C903	.....	X2	(2 )	.....	Z2	(8 )	.....	Z3
C904	.....	X2	(3 )	.....	Z2	(9 )	.....	Z3
C905	.....	Y2	(4 )	.....	Z2	(10 )	.....	Z3
C906	.....	Y2	(5 )	.....	Z2	(11 )	.....	Z3
						(12 )	.....	Z3

PB-758



* R779	.....	Y3	C711	.....	Y1	C724	.....	Z3	C737	.....	Z3	C750	.....	Y5	VR701b	.....	Z3
R780	.....	Y4	C712	.....	Y2	C725	.....	Z1	C738	.....	Z3				VR702a	.....	Z5
			C713	.....	Y1	C726	.....	Y3	C739	.....	Y4	Q701	.....	Y1	VR702b	.....	Z5
C701	.....	Y1	C714	.....	Z2	C727	.....	Z1	C740	.....	Y3	Q702	.....	Y2	(1 )	.....	Y1
C702	.....	Y2	C715	.....	Y1	C728	.....	Y3	C741	.....	Y3	Q703	.....	Y1	(2 )	.....	Y2
C703	.....	Y1	C716	.....	Y2	C729	.....	Z5	C742	.....	Y4	Q704	.....	Y2	(3 )	.....	Y2
C704	.....	Y3	C717	.....	Z1	C730	.....	Y5	C743	.....	Y3	Q705	.....	Y3	(4 )	.....	Y3
C705	.....	Y1	C718	.....	Y2	C731	.....	Z5	C744	.....	Y4				(5 )	.....	Y4
C706	.....	Y2	C719	.....	Z1	C732	.....	Z5	C745	.....	Y3	Q707	.....	Y3	(6 )	.....	Y4
C707	.....	Y2	C720	.....	Z2	C733	.....	Z3	C746	.....	Y5	Q708	.....	Y4	(7 )	.....	Y5
C708	.....	Y3	C721	.....	Z1	C734	.....	Z4	C747	.....	Y4	Q709	.....	Y5	(8 )	.....	Y5
C709	.....	Y2	C722	.....	Y2	C735	.....	Z3	C748	.....	Y5				(9 )	.....	Y5
C710	.....	Y3	C723	.....	Z1	C736	.....	Z3	C749	.....	Y4	VR701a	.....	Z3			

PB-760



PB-760 Component Location

R801	.....	X4	R808	.....	X4	C814	.....	Z1
R802	.....	X4	R809	.....	Y4	C815	.....	Z4
R803	.....	Z4	R810	.....	Z2	C816	.....	Z3
R804	.....	Y4	R811	.....	Y4	C817	.....	Z2
R805	.....	Y4	R812	.....	Y1	C818	.....	Z3
R806	.....	Z4	R813	.....	Y4			
R807	.....	Y4	R814	.....	Y1	VR801	.....	Y4
			R815	.....	X3	VR802	.....	X2
			R816	.....	Y3			
			R817	.....	Z3	Q801	.....	X4
			R818	.....	Z1	Q802	.....	Y4
			R819	.....	Y2	Q803	.....	X3
			R820	.....	Z1	Q804	.....	Y4
			R821	.....	Y1	Q805	.....	Y2
			R822	.....	Y3	Q806	.....	Y2
			R823	.....	Y1	Q807	.....	Y1
			R824	.....	Y3	Q808	.....	Y2
			R825	.....	Y1	Q809	.....	X1
			R826	.....	Y3	Q810	.....	X3
			R827	.....	X1			
						D801	.....	X1
						D802	.....	X1
						D803	.....	Y2
						D804	.....	Z2
						D805	.....	Z1
						ZD-1	.....	Z2
						C801	.....	X4
						C802	.....	X4
						C803	.....	X4
						C804	.....	Z3
						C805	.....	X3
						C806	.....	X4
						C807	.....	Z2
						C808	.....	X4
						C809	.....	X3
						C810	.....	X3
						C811	.....	Z1
						C812	.....	Y2
						C813	.....	Z1
						G1	.....	Z4
						G2	.....	Y4

REPLACEMENT PARTS

RESISTORS: $\pm 10\%$ $\frac{1}{4}$ Watt deposite carbon, unless noted otherwise

SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION
R001	100 Ω	R215	2.2K Ω	R260	4.7K Ω	R351	3.3K Ω
R002	150 Ω 7W	R216	47K Ω	R261	3.9K Ω	R352	6.8K Ω
	METAL OXIDE FIXED	R217	390 Ω	R262	3.9K Ω	R353	1M Ω
R003	180K Ω	R218	1K Ω	R263	47 Ω	R354	1M Ω
R004	180K Ω	R219	1K Ω	R264	100 Ω	R355	330K Ω
R005	180K Ω	R220	1K Ω	R265	39K Ω	R356	820K Ω
R006	180K Ω	R221	47 Ω	R266	100K Ω	R357	1K Ω
R007	680 Ω 2W	R222	100 Ω	R267	3.3K Ω	R358	5.6K Ω
	METAL OXIDE FIXED	R223	6.8K Ω	R268	3.3K Ω	R359	12K Ω
R008	680 Ω 2W	R224	6.8K Ω	R269	220K Ω	R360	1M Ω
	METAL OXIDE FIXED	R225	22K Ω	R270	220K Ω	R361	10K Ω
R009	10 Ω	R226	3.3K Ω	R271	1M Ω	R362	220K Ω
R010	150 Ω	R227	1K Ω	R272	1M Ω		
R011	2.2M Ω $\frac{1}{2}$ W	R228	4.7K Ω	R273	220K Ω	R401	4.7K Ω
	Ⓢ MODEL ONLY	R229	560 Ω	R274	220K Ω	R402	18K Ω
R012	2.2M Ω $\frac{1}{2}$ W	R230	10K Ω	R275	100K Ω	R403	1.5K Ω
	Ⓢ MODEL ONLY	R231	100K Ω	R276	33K Ω	R404	22K Ω
		R232	15K Ω	R277	33K Ω	R405	10K Ω
R101	100K Ω	R233	2.2K Ω	R278	33K Ω	R406	15K Ω
R102	22 Ω	R234	1K Ω	R279	150K Ω	R407	2.2K Ω
R103	22K Ω	R235	15K Ω	R280	150K Ω	R408	2.2K Ω
R104	4.7K Ω	R236	1K Ω	R281	100K Ω	R409	150K Ω
R105	1K Ω	R237	1K Ω	R282	18K Ω	R410	1.5K Ω
R106	220 Ω	R238	10 Ω	R283	1.2K Ω	R411	2.7K Ω
R107	1M Ω	R239	1K Ω	R284	1.2K Ω	R412	470 Ω
R108	100 Ω	R240	47K Ω	R285	10K Ω	R413	470 Ω
R109	10K Ω	R241	22 Ω	R286	10K Ω	R414	120 Ω
R110	10K Ω	R242	33K Ω	R287	470K Ω	R415	150K Ω
R111	100 Ω	R243	33K Ω	R288	470K Ω	R416	100 Ω
R112	3.3K Ω	R244	100K Ω	R289	470 Ω	R417	10K Ω
		R245	100K Ω	R290	10 Ω	R418	150K Ω
R201	1.8K Ω	R246	39 Ω	R291	100K Ω	R419	10K Ω
R202	560 Ω	R247	39 Ω	R292	47K Ω	R420	82K Ω
R203	1K Ω	R248	2.7K Ω	R293	6.8K Ω	R421	100 Ω
R204	470 Ω	R249	2.7K Ω	R294	2.2K Ω	R422	22K Ω
R205	1.5K Ω	R250	47K Ω	R295	10K Ω	R423	100 Ω
R206	2.2K Ω	R251	4.7K Ω	R296	39K Ω	R433	10K Ω
R207	680 Ω	R252	47K Ω	R297	15K Ω	R434	3.9K Ω
R208	1K Ω	R253	2.2K Ω 1W	R298	15K Ω	R435	3.3K Ω
R209	470 Ω	R254	12K Ω	R299	2.2K Ω	R436	10K Ω
R210	560 Ω	R255	47K Ω	R300	6.8K Ω	R437	470 Ω
R211	470 Ω	R256	220 Ω	R301	390 Ω $\frac{1}{2}$ W	R438	3.9K Ω
R212	22K Ω	R257	100K Ω	R302	6.8K Ω	R439	1.5K Ω
R213	470 Ω	R258	8.2K Ω			R440	150K Ω
R214	470 Ω	R259	47K Ω				

RESISTORS: $\pm 5\%$ TOLERANCE $\frac{1}{4}$ Watt deposited carbon, unless specified

SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION
R451	4.7K	R464	8.2K	R508	18K	R517	180
R452	4.7K			R509	82K	R518	180
R453	470K	R501	100K	R510	82K	R519	LO-NOISE
R454	470K	R502	100K				39K
R455	680 Ω			R511	LO-NOISE		39K
R456	680K	R503	LO-NOISE		47K	R520	LO-NOISE
			330K				39K
R457	33K			R512	LO-NOISE		
R458	33K	R504	LO-NOISE		47K	R521	LO-NOISE
R459	10K		330K	R513	1K		470K
R460	10K	R505	LO-NOISE	R514	1K	R522	LO-NOISE
			560K				470K
R461	470K			R515	LO-NOISE	R523	1K
R462	470K	R506	LO-NOISE		3.9K	R524	1K
			560K	R516	LO-NOISE		
R463	8.2K	R507	18K		3.9K	R525	1K

SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION
R526	1K	R606	½W 390	R733	1.8K	R807	8.2K X 2
R527	LO-NOISE	R607	100	R734	1.8K	R808	3.9K X 2
	33K			R735	6.8K	R809	3.9K X 2
R528	LO-NOISE	R651	56K	R736	6.8K	R810	METAL OXIDE
	33K	R652	56K	R737	22K		5.6K-½W X 2
R529	68K	R653	220K	R738	22K	R811	1.2K X 2
R530	68K	R654	220K	R739	6.8K		METAL OXIDE
R531	10K	R655	12K	R740	6.8K	R812	5.6K-½W X 2
R532	10K	R656	12K	R741	27K	R813	47K X 2
R533	150K	R657	27K	R742	27K		METAL OXIDE
R534	150K	R658	27K	R743	4.7K	R814	3.9K-½W X 2
R535	100K	R659	1M	R744	4.7K		METAL OXIDE
R536	100K	R660	1M	R745	6.8K	R815	22-½W X 2
	LO-NOISE	R661	1M	R746	6.8K		METAL OXIDE
R537	560K	R662	1M	R747	470K	R816	180-½W X 2
	LO-NOISE	R663	330K	R748	470K		METAL OXIDE
R538	560K	R664	330K	R749	470K	R817	47-½W X 2
	LO-NOISE	R665	560K	R750	470K	R818	1K X 2
R539	560K	R666	560K	R751	1.5K	R819	1K X 2
	LO-NOISE	R667	5.6K	R752	1.5K	R820	100K X 2
R540	560K	R668	5.6K	R753	1.5K		METAL OXIDE
R541	12K	R669	330K	R754	1.5K	R821	100-½W X 2
R542	12K	R670	330K	R755	18K		METAL OXIDE
R543	LO-NOISE	R671	1K	R756	18K	R822	100-½W X 2
	3.9K			R757	18K	R823	180 X 2
	LO-NOISE	R701	4.7K	R758	18K	R824	180 X 2
R544	3.9K	R702	4.7K	R759	3.3K		CEMENT SEALED
R545	180	R703	82K	R760	3.3K	R825	0.47-5W X 2
R546	180	R704	82K	R761	1M		CEMENT SEALED
R547	68K	R705	4.7K	R762	1M	R826	0.47-5W X 2
R548	68K	R706	4.7K	R763	1M	R827	120 X 2
	LO-NOISE	R707	22K	R764	1M		
R549	47K	R708	22K	R765	1M		METAL OXIDE
	LO-NOISE	R709	1.2M	R766	1M	R901	22-1W
R550	47K	R710	1.2M	R767	4.7K		METAL OXIDE
R551	1K	R711	2.7K	R768	4.7K	R902	22-1W
R552	1K	R712	2.7K	R769	47K		METAL OXIDE
R553	470	R713	220K	R770	47K	R903	4.7-3W
R554	470	R714	220K	R771	820		METAL OXIDE
	LO-NOISE	R715	33K	R772	820	R904	4.7-3W
R555	22K	R716	33K	R773	150K	R905	39K
	LO-NOISE	R717	27K	R774	150K	R906	39K
R556	22K	R718	27K	R775	5.6K	R907	3.9K
	LO-NOISE	R719	12K	R776	5.6K	R908	6.8K
R557	220K	R720	12K	R777	470	R909	22K
	LO-NOISE	R721	390K	R778	470	R910	6.8K
R558	220K	R722	390K	R779	1K	R911	820
R559	68K	R723	56K	R780	100	R912	10
R560	68K	R724	56K			R913	1M
R561	10K	R725	33K	R801	3.9K X 2	R914	22K
R562	10K	R726	33K	R802	47K X 2	R915	10K
		R727	18K		METAL OXIDE	R916	100K
		R728	18K	R803	10K-½W X 2	R917	82
R601	12K	R729	1M		47 X 2	R918	820
R602	12K	R730	1M	R804	47 X 2		METAL OXIDE
R603	27K	R731	1M	R805	47 X 2	R919	56-2W
R604	27K	R732	1M	R806	METAL OXIDE		
R605	1W 300				10K-½W X 2		

CAPACITORS

SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION
C001	0.04 μ F +80% -20% 25V ceramic	C013	0.01 μ F
C002	10 μ F +50% -10% 16V electrolytic	C014	0.01 μ F
C003	5PF $\pm$ 0.5PF 50V ceramic	C015	0.01 μ F
C004	47 μ F +50% -10% 16V electrolytic	C016	0.01 μ F
C005	4700 μ F +50% -10% 63V electrolytic	C017	0.01 μ F
C006	4700 μ F +50% -10% 63V electrolytic	C018	0.01 μ F
C007	0.1 μ F +80% -20% 25V ceramic	C019	2200PF
C008	0.1 μ F +80% -20% 25V ceramic	C020	2200PF
C009	0.1 μ F +80% -20% 25V ceramic	C021	0.047 μ F
C010	0.1 μ F +80% -20% 25V ceramic	C022	0.047 μ F
C011	1500 μ F +50% -10% 50V electrolytic	C023	0.1 μ F +80% -20% 25V ceramic
C012	3300 μ F +50% -10% 25V electrolytic		

SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION
C101	22PF	C106	100PF	C111	0.01 μ F	C116	33PF
C102	47PF	C107	5000PF	C112	5000PF	C117	5000PF
C103	22PF	C108	100PF	C113	1PF	C118	5000PF
C104	22PF	C109	100PF	C114	20PF	C119	5000PF
C105	7PF	C110	5000PF	C115	10PF		

SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION
C201	0.01 μ F +80% -20% 25V ceramic	C243	0.04 μ F +80% -20% 25V ceramic
C202	0.04 μ F +80% -20% 25V ceramic	C244	1 μ F +75% -10% 50V electrolytic
C203	0.04 μ F +80% -20% 25V ceramic	C245	560PF $\pm$ 5% 50V polystyrol
C204	47PF $\pm$ 10% 50V ceramic	C246	10 μ F +50% -10% 16V electrolytic
C205	0.04 μ F +80% -20% 25V ceramic	C247	4.7 μ F +75% -10% 25V electrolytic
C206	0.01 μ F +80% -20% 25V ceramic	C248	4.7 μ F +75% -10% 25V electrolytic
C207	2.7PF $\pm$ 5% 500V ceramic	C249	4.7 μ F +75% -10% 25V electrolytic
C208	0.04 μ F +80% -20% 25V ceramic	C250	470 μ F +50% -10% 16V electrolytic
C209	470PF $\pm$ 20% 50V ceramic	C251	0.22 μ F +50% -20% 35V solid tantalum
C210	0.04 μ F +80% -20% 25V cramic	C252	0.22 μ F +50% -20% 35V solid tantalum
C211	0.01 μ F +80% -20% 25V ceramic	C253	470PF $\pm$ 20% 50V ceramic
C212	0.04 μ F +80% -20% 25V ceramic	C254	470PF $\pm$ 20% 50V ceramic
C213	0.04 μ F +80% -20% 25V ceramic	C255	10 μ F +50% -10% 16V electrolytic
C214	0.04 μ F +80% -20% 25V ceramic	C256	1800PF $\pm$ 5% 50V polystyrol
C215	0.04 μ F +80% -20% 25V ceramic	C257	1800PF $\pm$ 5% 50V polystyrol
C216	0.04 μ F +80% -20% 25V ceramic	C258	820PF $\pm$ 5% 50V polystyrol
C217	0.04 μ F +80% -20% 25V ceramic	C259	820PF $\pm$ 5% 50V polystyrol
C218	470PF $\pm$ 20% 50V ceramic	C260	0.22 μ F +50% -20% 35V solid tantalum
C219	100PF $\pm$ 10% 50V ceramic	C261	0.22 μ F +50% -20% 35V solid tantalum
C220	470PF $\pm$ 20% 50V ceramic	C262	10 μ F +50% -10% 16V electrolytic
C221	470PF $\pm$ 20% 50V ceramic	C263	47 μ F +50% -10% 16V electrolytic
C222	470PF $\pm$ 20% 50V ceramic	C264	1 μ F +75% -10% 50V electrolytic
C223	0.04 μ F +80% -20% 25V ceramic	C265	1 μ F +75% -10% 50V electrolytic
C224	0.04 μ F +80% -20% 25V ceramic	C266	0.01 μ F +80% -20% 25V ceramic
C225	470PF $\pm$ 20% 50V ceramic	C267	0.01 μ F +80% -20% 25V ceramic
C226	0.01 μ F +80% -20% 25V ceramic	C268	0.01 μ F +80% -20% 25V ceramic
C227	0.04 μ F +80% -20% 25V ceramic	C269	0.01 μ F +80% -20% 25V ceramic
C228	0.01 μ F +80% -20% 25V ceramic		
C229	0.01 μ F +80% -20% 25V ceramic		
C230	0.47PF $\pm$ 5% 500V ceramic	C351	0.04 μ F +80% -20% 25V ceramic
C231	470PF $\pm$ 20% 50V ceramic	C352	0.015 μ F $\pm$ 10% 50V mylar
C232	0.04 μ F +80% -20% 25V ceramic	C353	0.01 μ F $\pm$ 10% 50V mylar
C233	0.04 μ F +80% -20% 25V ceramic	C354	3300PF $\pm$ 10% 50V mylar
C234	0.01 μ F +80% -20% 25V ceramic	C355	2200PF $\pm$ 10% 50V mylar
C235	0.01 μ F +80% -20% 25V ceramic	C356	2200PF $\pm$ 10% 50V mylar
C236	0.1 μ F +80% -20% 25V ceramic	C357	3900PF $\pm$ 10% 50V mylar
C237	2.2 μ F +75% -10% 25V electrolytic	C358	0.033 μ F $\pm$ 10% 50V mylar
C238	0.1 μ F +80% -20% 25V ceramic		
C239	0.1 μ F +80% -20% 25V ceramic		
C241	10 μ F +50% -10% 16V electrolytic	C401	0.04 μ F +80% -20% 25V ceramic
C242	4.7 μ F +75% -10% 25V electrolytic	C402	0.04 μ F +80% -20% 25V ceramic
		C403	47 μ F +50% -10% 16V electrolytic

SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION
C404	47 μ F +50% -10% 16V electrolytic	C602	0.033 μ F $\pm$ 10% 50V mylar
C405	0.04 μ F +80% -20% 25V ceramic	C603	470PF $\pm$ 5% 50V polystyrol
C406	10PF $\pm$ 1PF 50V ceramic	C604	470PF $\pm$ 5% 50V polystyrol
C407	0.04 μ F +80% -20% 25V ceramic	C605	10 μ F +50% -10% 16V electrolytic
C408	0.04 μ F +80% -20% 25V ceramic		
C409	0.04 μ F +80% -20% 25V ceramic	C651	0.1 μ F $\pm$ 10% 50V mylar
C410	450PF $\pm$ 5% 50V polystyrol	C652	0.1 μ F $\pm$ 10% 50V mylar
C411	15PF $\pm$ 10% 50V ceramic	C653	0.039 μ F $\pm$ 10% 50V mylar
C412	0.04 μ F +80% -20% 25V ceramic	C654	0.039 μ F $\pm$ 10% 50V mylar
C413	0.04 μ F +80% -20% 25V ceramic	C655	2.2 μ F $\pm$ 10% 35V tantalum
C414	0.04 μ F +80% -20% 25V ceramic	C656	2.2 μ F $\pm$ 10% 35V tantalum
C415	0.04 μ F +80% -20% 25V ceramic	C657	820PF $\pm$ 10% 50V mylar
C416	0.04 μ F +80% -20% 25V ceramic	C658	820PF $\pm$ 10% 50V mylar
C417	0.04 μ F +80% -20% 25V ceramic	C659	2200PF $\pm$ 5% 50V polystyrol
C418	0.1 μ F +80% -20% 25V ceramic	C660	2200PF $\pm$ 5% 50V polystyrol
C419	0.04 μ F +80% -20% 25V ceramic	C661	2.2 μ F $\pm$ 10% 35V tantalum
C420	0.04 μ F +80% -20% 25V ceramic	C662	2.2 μ F $\pm$ 10% 35V tantalum
C425	0.04 μ F +80% -20% 25V ceramic	C663	100 μ F +50% -10% 25V electrolytic
C426	2.2 μ F +75% -10% 25V electrolytic	C664	100 μ F +50% -10% 25V electrolytic
C427	100PF $\pm$ 10% 50V ceramic		
C428	0.04 μ F +80% -20% 25V ceramic	C701	1 μ F $\pm$ 10% 10V tantalum
C429	3300PF $\pm$ 5% 50V polystyrol	C702	1 μ F $\pm$ 10% 10V tantalum
C430	3300PF $\pm$ 5% 50V polystyrol	C703	100 μ F +50% -10% 25V electrolytic
		C704	100 μ F +50% -10% 25V electrolytic
C451	1 μ F $\pm$ 20% 35V solid tantalum	C705	10P $\pm$ 10% 50V ceramic
C452	1 μ F $\pm$ 20% 35V solid tantalum	C706	10P $\pm$ 10% 50V ceramic
C453	0.33 μ F $\pm$ 20% 35V solid tantalum	C707	2.2 μ F $\pm$ 10% 25V tantalum
C454	0.33 μ F $\pm$ 20% 35V solid tantalum	C708	2.2 μ F $\pm$ 10% 25V tantalum
C455	10 μ F +50% -10% 50V electrolytic	C709	22 μ F +50% -10% 16V electrolytic
		C710	22 μ F +50% -10% 16V electrolytic
C501	2.2 μ F $\pm$ 20% 10V solid tantalum	C711	10 μ F $\pm$ 10% 10V tantalum
C502	2.2 μ F $\pm$ 20% 10V solid tantalum	C712	10 μ F $\pm$ 10% 10V tantalum
C503	47PF $\pm$ 10% 50V ceramic	C713	0.015 μ F $\pm$ 10% 50V mylar
C504	47PF $\pm$ 10% 50V ceramic	C714	0.015 μ F $\pm$ 10% 50V mylar
C505	150PF $\pm$ 10% 50V ceramic	C715	100PF $\pm$ 10% 50V ceramic
C506	150PF $\pm$ 10% 50V ceramic	C716	100PF $\pm$ 10% 50V ceramic
C507	33 μ F +50% -10% 16V electrolytic	C717	1000PF $\pm$ 10% 50V mylar
C508	33 μ F +50% -10% 16V electrolytic	C718	1000PF $\pm$ 10% 50V mylar
C509	1800PF $\pm$ 10% 50V mylar	C719	0.022 μ F $\pm$ 10% 50V mylar
C510	1800PF $\pm$ 10% 50V mylar	C720	0.022 μ F $\pm$ 10% 50V mylar
C511	6800PF $\pm$ 10% 50V mylar	C721	0.047 μ F $\pm$ 10% 50V mylar
C512	6800PF $\pm$ 10% 50V mylar	C722	0.047 μ F $\pm$ 10% 50V mylar
C513	22 μ F +50% -10% 16V electrolytic	C723	1000PF $\pm$ 10% 50V mylar
C514	22 μ F +50% -10% 16V electrolytic	C724	1000PF $\pm$ 10% 50V mylar
C515	180PF $\pm$ 5% 50V polystyrol	C725	6800PF $\pm$ 10% 50V mylar
C516	180PF $\pm$ 5% 50V polystyrol	C726	6800PF $\pm$ 10% 50V mylar
C517	0.33 μ F $\pm$ 20% 35V tantalum	C727	0.068 μ F $\pm$ 10% 50V mylar
C518	0.33 μ F $\pm$ 20% 35V tantalum	C728	0.068 μ F $\pm$ 10% 50V mylar
C519	100 μ F +50% -10% 10V electrolytic	C729	1800PF $\pm$ 10% 50V mylar
C520	100 μ F +50% -10% 10V electrolytic	C730	1800PF $\pm$ 10% 50V mylar
C521	2.2 μ F $\pm$ 20% 10V tantalum	C731	3900PF $\pm$ 10% 50V mylar
C522	2.2 μ F $\pm$ 20% 10V tantalum	C732	3900PF $\pm$ 10% 50V mylar
C523	47PF $\pm$ 10% 50V ceramic	C733	1000PF $\pm$ 10% 50V mylar
C524	47PF $\pm$ 10% 50V ceramic	C734	1000PF $\pm$ 10% 50V mylar
C525	33 μ F +50% -10% 16V electrolytic	C735	1000PF $\pm$ 10% 50V mylar
C526	33 μ F +50% -10% 16V electrolytic	C736	1000PF $\pm$ 10% 50V mylar
C527	100 μ F +50% -10% 10V electrolytic	C737	0.022 μ F $\pm$ 10% 50V mylar
C528	100 μ F +50% -10% 10V electrolytic	C738	0.022 μ F $\pm$ 10% 50V mylar
C529	33 μ F +50% -10% 16V electrolytic	C739	0.027 μ F $\pm$ 10% 50V mylar
C530	33 μ F +50% -10% 16V electrolytic	C740	0.027 μ F $\pm$ 10% 50V mylar
C531	0.33 μ F $\pm$ 20% 35V tantalum	C741	10 μ F $\pm$ 10% 10V tantalum
C532	0.33 μ F $\pm$ 20% 35V tantalum	C742	10 μ F $\pm$ 10% 10V tantalum
C533	33 μ +50% -10% 16V electrolytic	C743	4.7P $\pm$ 10% 50V ceramic
C534	33 μ +50% -10% 16V electrolytic	C744	4.7P $\pm$ 10% 50V ceramic
C535	0.04 +80% -20% 50V ceramic	C745	33P $\pm$ 10% 50V ceramic
		C746	33P $\pm$ 10% 50V ceramic
C601	0.033 μ F $\pm$ 10% 50V mylar	C747	2.2 μ F $\pm$ 10% 25V tantalum

SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION
C748	2.2 μ F $\pm$ 10% 25V tantalum	C815	1 μ F X 2 +50% -10% 100V electrolytic
C749	47 μ F +50% -10% 50V electrolytic	C816	.01 μ F X 2 500V ceramic
C750	47 μ F +50% -10% 50V electrolytic	C817	.04 μ F X 2 +80% -20% 50V ceramic
C801	4.7 μ F X 2 $\pm$ 10% 10V tantalum	C818	47 μ F X 2 +50% -10% 16V electrolytic
C802	470PF X 2 $\pm$ 10% 50V ceramic	C901	0.22 μ F $\pm$ 10% 50V ceramic
C803	33 μ F X 2 +50% -10% 10V electrolytic	C902	0.22 μ F $\pm$ 10% 50V ceramic
C804	100 μ F X 2 +50% -10% 63V electrolytic	C903	220 μ F +50% -10% 10V electrolytic
C805	47P X 2 $\pm$ 10% 50V ceramic	C904	220 μ F +50% -10% 10V electrolytic
C806	47 μ F X 2 +50% -10% 16V electrolytic	C905	100 μ F +50% -10% 10V electrolytic
C807	100 μ F X 2 +50% -10% 50V electrolytic	C906	4.7 μ F +50% -10% 50V electrolytic
C808	1000P X 2 $\pm$ 10% 50V mylar	C907	22 μ F +50% -10% 50V electrolytic
C809	1000PF X 2 $\pm$ 10% 50V mylar	C908	100 μ F +50% -10% 50V electrolytic
C810	47PF $\pm$ 10% 50V ceramic	C909	330 μ F +50% -10% 35V electrolytic
C811	.022 μ F X 2 $\pm$ 10% 50V mylar	C910	330 μ F +50% -10% 35V electrolytic
C812	.022 μ F X 2 $\pm$ 10% 50V mylar	C911	220 μ F +50% -10% 16V electrolytic
C813	1 μ F x 2 +50% -10% 100V electrolytic	C912	100P $\pm$ 10% 50V ceramic
C814	.01 μ F X 2 500V ceramic		

TRANSISTORS & IC

SYMBOL NO.	DESCRIPTION	SYMBOL NO.	DESCRIPTION
Q101	FM RF AMPLIFIER 3SK30, 2SK19	Q801	POWER AMP 2SA620 X 2
Q102	FM MIXER 2SC535	Q802	POWER AMP 2SA620 X 2
Q103	FM LOCAL OSCILATOR SE3001	Q803	POWER AMP 2SC1103A X 2
Q201	FM IF AMPLIFIER 2SC381	Q804	POWER AMP 2SC1103A X 2
Q202	FM IF AMPLIFIER 2SC381	Q805	POWER AMP 2SC945 X 2
Q203	FM IF AMPLIFIER & LIMITTER LM703	Q806	POWER AMP 2SA733 X 2
Q204	FM LIMITTER TA7061AP	Q807	POWER AMP 2SC1431 X 2
Q205	FM AGC AMPLIFIER 2SC381	Q808	POWER AMP 2SA762 X 2
Q206	FM SIGNAL METER AMPLIFIER 2SC381	Q809	POWER AMP 2SC1079 X 2
Q207	FM MUTING DC AMPLIFIER 2SC372	Q810	POWER AMP 2SA679 X 2
Q208	WIRED OR GATE FOR FM MUTING 2SC372	Q901	POWER SUPPLY 2SC1382
Q209	FM MUTING DC AMPLIFIER 2SC1000	Q902	PROTECTION CIRCUIT 2SC945
Q210	FM MUTING DC AMPLIFIER 2SA640	Q903	PROTECTION CIRCUIT 2SC945
Q211	FM MUTING DC AMPLIFIER 2SC372	Q904	PROTECTION CIRCUIT 2SA733
Q212	FM MUTING DC AMPLIFIER 2SC372	Q905	PROTECTION CIRCUIT 2SC1382
Q213	WIRED OR GATE FOR FM MUTING 2SC372	Q906	PROTECTION CIRCUIT 2SC945
Q214	FM STEREO DEMODULATOR μ PC554C	Q505	PHONO AMP 2SC1345
Q215	FM MUTING 2SK30	Q506	PHONO AMP 2SC1345
Q216	FM MUTING 2SK30	Q507	MIC AMP 2SC1345
Q217	FM OUTPUT AMPLIFIER 2SC1000	Q508	MIC AMP 2SC1345
Q218	FM OUTPUT AMPLIFIER 2SC1000	Q509	MIC AMP 2SA640
Q219	ACTIVE DUMMY LOAD 2SC735	Q510	MIC AMP 2SA640
Q351	AM NOISE FILTER AMPLIFIER 2SC372	Q511	MIC AMP 2SC1345
Q401	AM RF AMPLIFIER 2SC381	Q512	MIC AMP 2SC1345
Q402	AM MIXER & OSCILATOR 2SC372	Q651	FILTER AMP 2SC1345
Q403	AM IF AMPLIFIER 2SC381	Q652	FILTER AMP 2SC1345
Q404	AM IF AMPLIFIER 2SC372	Q701	LINEAR EQ AMP 2SC1345
Q451	MIC MIXER AMP 2SC1345	Q702	LINER EQ AMP 2SC1345
Q452	MIC MIXER AMP 2SC1345	Q703	LINER EQ AMP 2SC1345
Q501	PHONO AMP 2SC1345	Q704	LINER EQ AMP 2SC1345
Q502	PHONO AMP 2SC1345	Q705	TONE AMP 2SC1345
Q503	PHONO AMP 2SA640	Q706	TONE AMP 2SC1345
Q504	PHONO AMP 2SA640	Q707	TONE AMP 2SC1345
		Q708	TONE AMP 2SC1345

DIODES

SYMBOL NO.			DESCRIPTION	SYMBOL NO.			DESCRIPTION
D001	RECTIFIER	HIFI SPECIAL		D405	AUDIO & METER DETECTOR	IS188	
D002	RECTIFIER	HIFI SPECIAL		D406	METER PROTECTION	IS1554V	
D003	RECTIFIER	HIFI SPECIAL					
D004	RECTIFIER	HIFI SPECIAL		D801	POWER AMPLIFIER	SV-03	X 2
D005	RECTIFIER	IN4003		D802	POWER AMPLIFIER	IS1554	X 2
D006	RECTIFIER	IN4003		D803	POWER AMPLIFIER	IS1554	X 2
				D804	POWER AMPLIFIER	IS1554	X 2
				D805	POWER AMPLIFIER	IS1554	X 2
D201	CHECK POINT DETECTOR	IS188					
D202	FM LIMITTER	IS188		D901	POWER SUPPLY	IN4003	
D203	CHECK POINT DETECTOR	IS188		D902	PROTECTION CIRCUIT	IN4003	
D204	FM RATIO DETECTOR	IS188		D903	PROTECTION CIRCUIT	IS188	
D205	FM RATIO DETECTOR	IS188		D904	PROTECTION CIRCUIT	IN4002	
D206	AGC DETECTOR	IS188					
D207	AGC DETECTOR	IS188					
D208	FM METER DETECTOR	IS188					
D209	VOLTAGE STABILIZER	WZ120					
D210	TEMPERATURE COMPENSATION	KB165					
D211	NEGATIVE VOLTAGE PROTECTION	IS1554V					
D402	TEMPERATURE COMPENSATION	KB265					
D403	TEMPERATURE COMPENSATION	KB165					
D404	AGC DETECTOR	IS1554V					

ZENER DIODES

SYMBOL NO.		DESCRIPTION	
ZD801	VOLTAGE BEGULATOR	CZ-119	X 2
ZD901	VOLTAGE BEGULATOR	CZ-119	

VARIABLE RESISTORS

SYMBOL NO.			DESCRIPTION	SYMBOL NO.			DESCRIPTION
VR001	500Ω-B	FOR FM MUTING LEVEL		VR401	1KΩ-B	FOR AM AGC SETTING	
VR002	200KΩ-B X 2	FOR VOLUME CONTROL		VR451	100KΩ-A X 2	FOR MIC-MIXING	
VR201	4.7KΩ-B	FOR FM IF GAIN		VR701	100KΩ-B X 2	FOR BASS CONTROL	
VR202	4.7KΩ-B	FOR FM SIGNAL METER SWING		VR702	50KΩ-B X 2	FOR TREBLE CONTROL	
VR203	4.7KΩ-B	FOR FM STEREO SEPARATION					
				VR801	4.7KΩ-B (X 2)	FOR POWER AMP	
				VR802	330Ω-B (X 2)	FOR POWER AMP	

SWITCHES

SYMBOL NO.				DESCRIPTION	SYMBOL NO.				DESCRIPTION
S001	4-8-6	ROTARY SW	FUNCTION		S603	2-2	PUSH SW	STEREO ONLY	
S002	2-4-6	ROTARY SW	SPEAKER		S651	2-2	PUSH SW	LOW CUT	
S003	2-2	(⊙, ⊕ MODEL)	POWER		S652	4-2	PUSH SW	HI CUT	
	1-1	(⊙ MODEL)			S701	2-4-5	ROTARY SW	LINEAR EQUALIZER	
		PUSH SW			S702	2-3	LEVER SW	BASS	
		(⊕ MODEL)			S703	2-3	LEVER SW	TREBLE	
S201	2-2	(⊕ MODEL)	DE EMPHASIS		S751	2-2	PUSH & PULL SW	MIC-MIXING	
		SLIDE SW			S901	2-3	LEVER SW	MONITOR	
S351	4-2	SLIDE SW	AM NOSE FILTER		S902	4-3	LEVER SW	DUBBING	
S601	2-2	PUSH SW	LOUDNESS		S903	3-3	LEVER SW	MODE	
S602	2-2	PUSH SW	MUTING						

TRANSFORMERS & FILTERS

SYMBOL NO.			DESCRIPTION	SYMBOL NO.			DESCRIPTION
T001	POWER TRANS	P-1875 ⊕ MODEL		T204	FM METER TRANS	TKAC-14733K	
		P-1876 ⊙ MODEL		T205	19KHz TRANS	02-1138	
		P-1877 ⊙ MODEL		T206	38KHz TRANS	02-1139	
T101	FM IF TRANS			T207	19KHz TRANS	02-1138	
T201	FM IF TRANS	TKAC-14733K		T401	AM RF TRANS	YXR-19030BD	
T202	FM IF TRANS	TKAC-14733K		T402	AM OSCILATOR TRANS	YXR-18909GN	
T203	FM DESCRIMINATOR TRANS	V4FCC-20693BCV		T403	AM IF TRANS	V6AQC-20025AA	

SYMBOL NO.	DESCRIPTION	
T404	AM IF TRANS	V6AQC-20025AA
T405	AM IF TRANS	YMC-15002A
L001	AM ANTENNA	LUX-16132
L101	FM ANTENNA COIL	
L102	FM RF COIL	

SYMBOL NO.	DESCRIPTION	
L103	FM RF COIL	
L104	FM OSCILATOR COIL	
F201	FM IF FILTER	CF10M-12C
F202	FM IF FILTER	CF10M-12C
F203	FM LOW-PASS FILTER	LUX-14562

LAMPS

SYMBOL NO.	DESCRIPTION	
PL001	12V 30mA	FOR FM STEREO INDICATOR
PL002	12V 1.5W	FOR DIAL ILLUMINATION
PL003	12V 1.5W	FOR DIAL ILLUMINATION
PL004	12V 1.5W	FOR DIAL ILLUMINATION
PL005	12V 1.5W	FOR DIAL ILLUMINATION

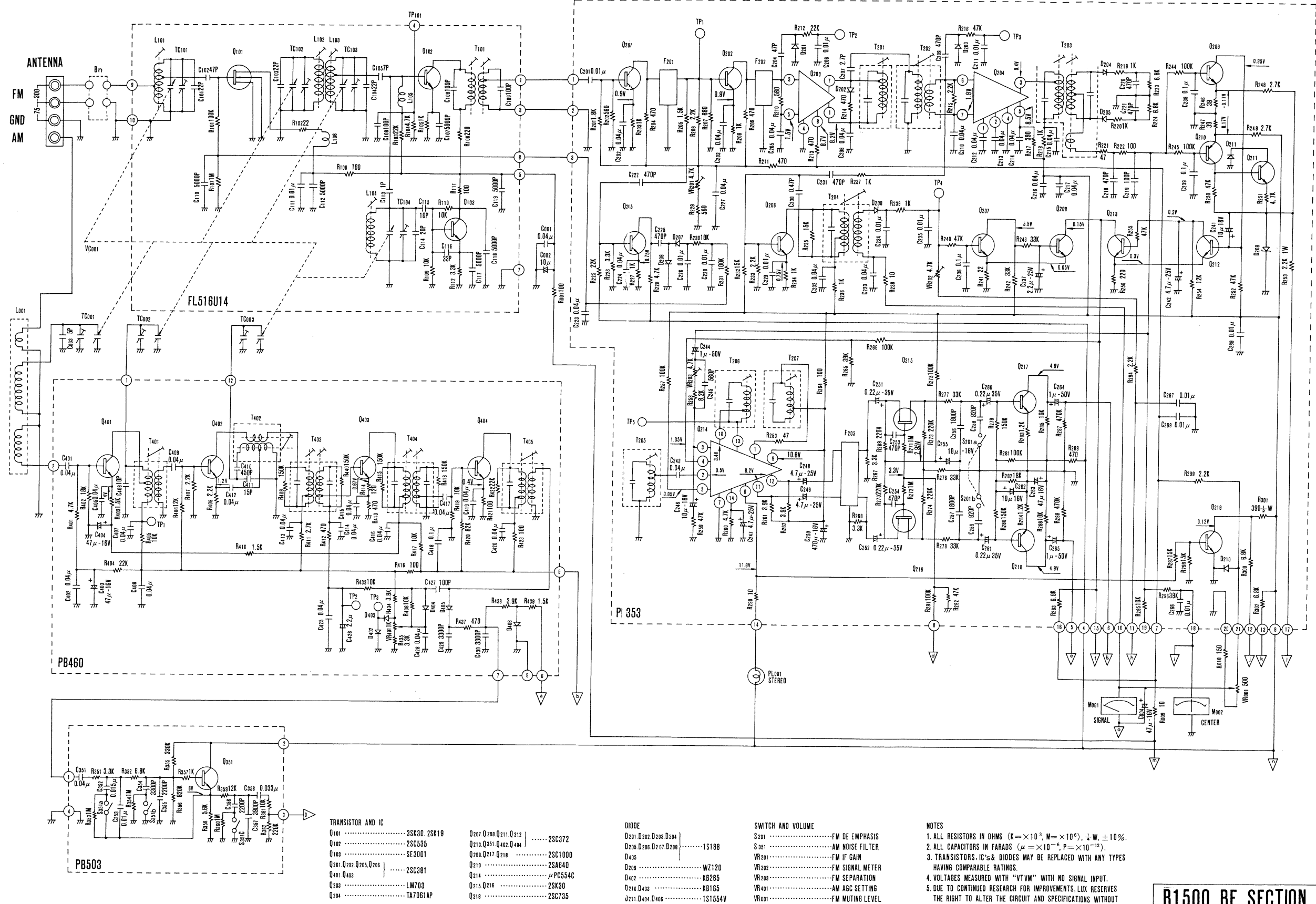
SYMBOL NO.	DESCRIPTION	
PL006	12V 1.5W	FOR DIAL ILLUMINATION
PL007	12V 1.5W	FOR DIAL ILLUMINATION
PL008	12V 1.5W	FOR DIAL ILLUMINATION
PL009	12V 1.5W	FOR DIAL ILLUMINATION
PL010	12V 1.5W	FOR DIAL ILLUMINATION

LUX CORPORATION, JAPAN

HEAD OFFICE & FACTORY 1-8-31 NAGAHASHI, NISHINARI-KU, OSAKA
 PHONES: 632 0031 CABLE: LUXELECT OSAKA
 TELEX: J63694

Printed in Japan

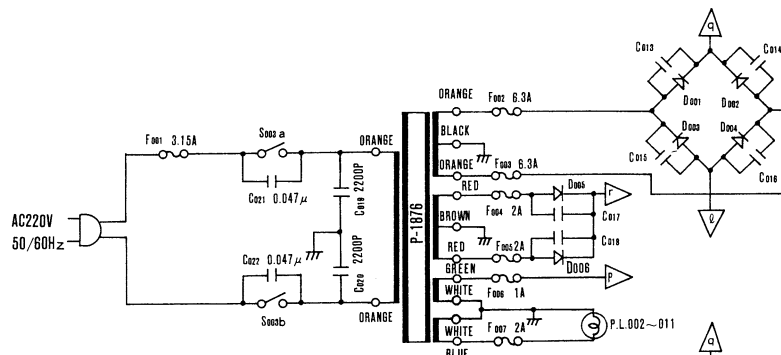
- RF SECTION



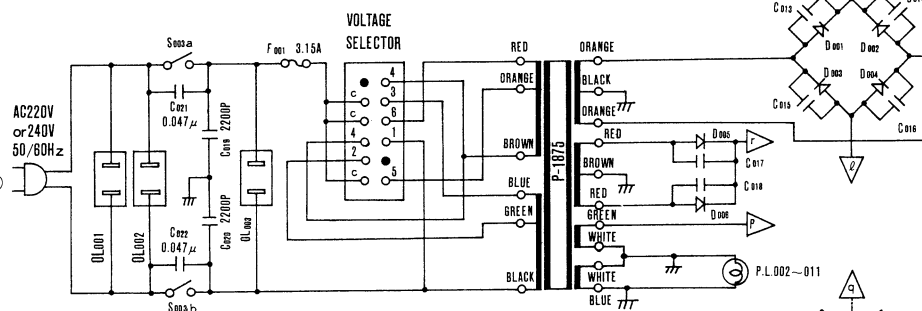
R1500 RF SECTION

■ POWER SUPPLY DIAGRAM FOR THE THREE MODELS

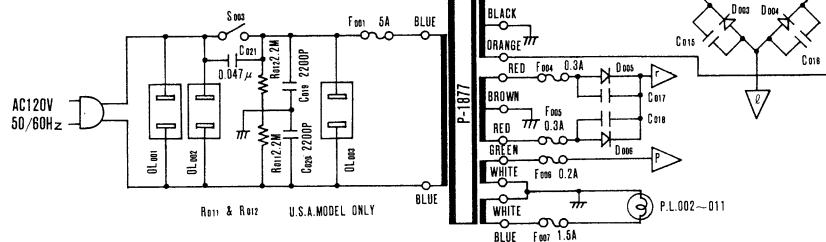
(1) SEMCO MODEL Ⓢ



(2) EUROPEAN MODEL ⓔ



(3) U.S.A. & CANADIAN MODEL Ⓤ



SWITCH
S003-----POWER

C013---C018 0.01μF
D001---D004 HI-FI SPECIAL
D005---D006 IN4003